'59 MERCURY, EDSEL, LINCOLN

MOTOR TREND

"I drove a stock Chevrolet–135 mph!"

DECEMBER 1958 35c

Is the NEW Studebaker Small Car as good as the Rambler? How about the other cars under $2000– U.S. and import?

See Our Ratings page 16

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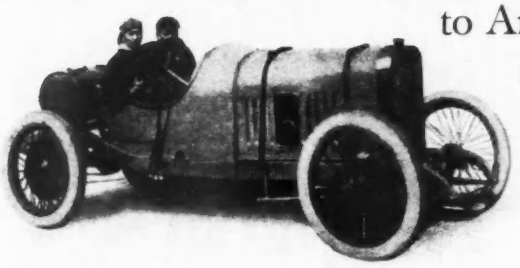
N. Y.

In 1913...PEUGEOT introduced the modern small, fast engine to American racing in this Indianapolis Speedway winner!



Now in 1958... PEUGEOT comes over from France again with this excitingly sensible Sportsedan!

SPECIFICATIONS

Engine: 1,468 cc.
Bore and Stroke: 80 mm x 73 mm
Compression Ratio: 7.5
Cylinder: removable wet liner
Cylinder Head: hemispherical combustion chamber
Valve Arrangement: overhead
Brake Horse Power: 65 at 4750 rpm
Overall Length: 14 ft. 8 in.
Overall Width: 5 ft. 6 in.
Battery: 12 volt, 58 amp. hr.

Peugeot—one of the world's great names in auto making—now brings to America a 5-6 passenger family sedan that has all the spirit and glow of a sports car. Body is single unit construction. The 4 cylinder Peugeot engine has fancy get-up-and-go, gives 30 miles per gallon and over 80 mph top speed. The very sensible Peugeot price of $2175 (P.O.E., N.Y.) includes ALL this: sliding sun-roof, whitewall or Michelin "X" tires, heater-defroster, economy 4th gear, windshield washers, dashboard clock and reclining "sleep-on" seats.

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DECEMBER, 1958

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NEXT MONTH

Special Issue!
Buyers Guide to Cars of the World

VOL. 10 NO. 12

MOTOR TREND

THE COVER: Flinging a challenge to the economy imports, Studebaker-Packard introduces its new Lark (upper). It joins the Rambler American (lower) in the campaign to garner a fair share of the economy car market. Lark photo by William Carroll.

CONTENTS

"The Voice of the Motoring Public . . . campaigning for better and safer cars."

MEMO FROM THE EDITOR

AT THE TIME of writing this, your editor was making last-minute preparations for a flight over the pole to Paris, France for the annual Paris Salon, scene of the European manufacturers' first offerings of their models for the coming year. Having seen most of the Detroit cars, it provided the opportune moment for a comparison of the two philosophies—they are: Detroit (or most of it) feels that today's car has to be bigger, longer, lower, flashier, and gaudier than yesterday's; the Europeans (for the most part) stick to their belief that a car's basic purpose is to provide good, economical transportation.

The point is that there is room for both types of cars. MOTOR TREND has never advocated that *all* cars should be poured from one mold; that they should *all* be small; that they should *all* be completely devoid of power accessories or other gadgetry. We do, however, sincerely feel that much of what goes into the present-day Detroit product could be channeled into other lines of development, giving us better and safer cars.

As you read this you will recall the fuss raised over the announcement by a St. Louis parking firm that decided that "some 1959 automobiles are too long, too low and covered with too many expensive gadgets to risk parking them." They had, and have, a legitimate complaint. What wasn't said was that it takes more room to park these cars, too, thereby cutting down on the number of parking fees that can be taken in each day.

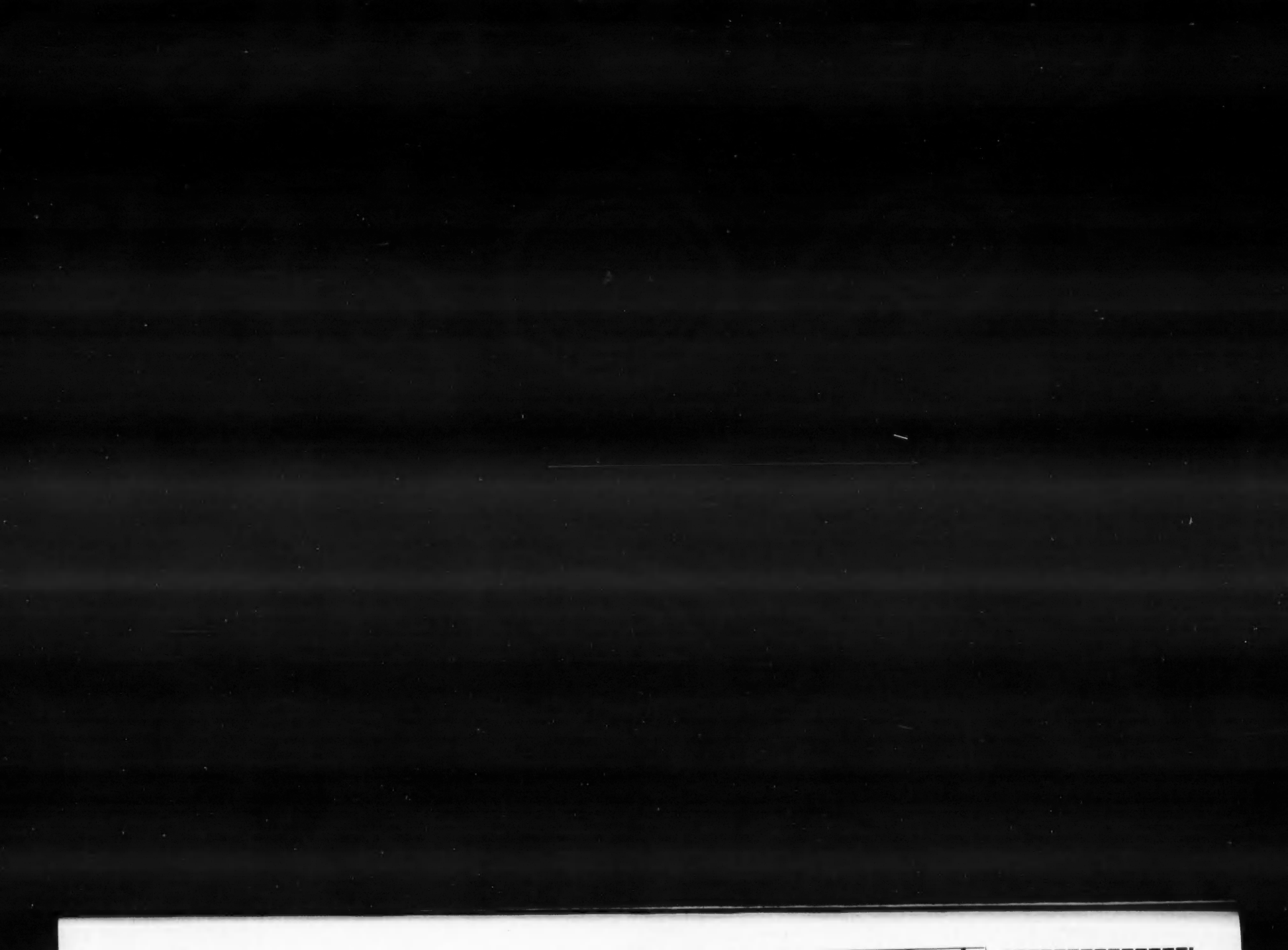
In our many talks with Detroit industry officials, we sometimes wonder at their lack of astuteness in analyzing the need for the smaller, more-economical-to-operate, imported cars. We have been told, "They're a passing fancy." A sale of 350,000 (estimated for '58) is "a passing fancy"? We know at least seven U.S. manufacturers who would like to have anything from a 10 per cent cut of that, on up.

The big-car vs. small-car debate still goes on . . . but when they share the same traffic jam, neither power nor size seems to matter.

"Who wants to be cramped up in those little bugs? They're not comfortable." Comfortable enough for the purpose intended—of getting you back and forth to work, to the store, and to take the kids to school.

"They don't even use V8 engines. They're way under-powered." Granted, most of them use fours or sixes and that the imported *sedans* don't go fast. But, they'll get you cross-town as quick as the most powerful machine Detroit produces. And why has Detroit *suddenly* decided to introduce "economy" versions of their V8s, and even re-introduce a six?

The fact remains that people *are* buying these cars, and *have been* buying them at a time when the only "Detroit" manufacturer (in Kenosha, Wis.) that can boast of increased sales does so because of the acceptance of its smaller car. Now, another manufacturer is going to try its luck with a smaller car. We think they will be successful, if for no other reason than that the traffic and parking situation is becoming so acute. It happened in European countries as well (along with the other factors—high cost of gasoline, high taxes, etc.). There the cars were also once massive and pretentious. Today their cars are scaled in accordance with the roads and traffic conditions. That this will happen here is inevitable.



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LETTERS

M T

BEAUTIFUL "NEW" BUICKS?

Dear Sirs:

I was quite interested in your report on the 1959 Buick. I was struck with the many "new" features of the car. Here they are as I saw them—I am listing the features and when they were first introduced:

Canted headlights—Lincoln, 1958; canted fins—Ford, 1957; large, round tail-stop light —Ford, 1952; thin, straight roofline (gives better headroom in back)—Mercury, 1957; front grille—Buick, 1958; cowbelly frame—Ford, 1957; general appearance of rear glass area—Studebaker, 1946.

Norman E. Runyon — Palacios, Tex.

Gentlemen:

My first and only comment on the '59 Buicks—they are the most beautiful Fords on the road.

F. Gregory Cornett — Montgomery, Ala.

Dear Sir:

Buick is esthetically good, with tasteful and discreet use of chrome. But still, gentlemen, couldn't a giant like GM have been more original?

W. E. Treichler, Jr. — Sanborn, N.Y.

Dear Sirs:

After looking at the "new" Buick for '59 I would like to make these comments: Although a Ford fan, I still must congratulate GM on what I consider a fine design. However, I think GM deserves little credit for a body design so representing late Ford and Chrysler styling.

If Buick sells good for '59, I believe it will be due to styling features pioneered by Ford and Chrysler.

Robert Lambertus — Williamsport, Pa.

WHOSE SIDE ARE YOU ON?

Sirs:

I have one complaint. Why run articles like "Why I Didn't Buy a '58," then go and do a story on what a beaut the new Buick is? To whom are you paying homage—Detroit, or us poor suckers who want a decently-proportioned car that doesn't require you to be in a horizontal position to drive?

Charles R. Hoeft, Jr. — Framingham, Mass.

WHY I BOUGHT A '58

Dear Sirs:

I bought a '58 car and have my '59 ordered. I think the American-built car is the finest in the world as an all-around car. This idea of too much chrome—take the Oldsmobile for '58 and look how it sold.

The present influx of midgets from Europe (tin cans with lawn-mower motors) seems to be a passing fancy. They are not good for more than two people—who are not too large, at that. These cars are made for the European pocketbook, and I don't think any European car, outside of the most expensive, can match the Rambler in economy, trade-in, riding quality, etc.

I was in Europe last year, and all the people there who can afford an American car have them. They know a good thing when they see it.

P. A. Schlueter — Pompano Beach, Fla.

OH, NO—PLEASE DON'T!

Gentlemen:

I have just read the article, "Will Chrysler Change Simca?" and have seen the accompanying sketches in October MT, and it made me sick.

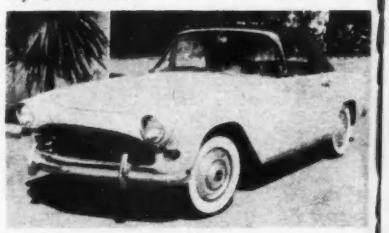
Simca, like most other imported cars, does not depend on its styling for sales. Besides, freezing the design has made it even more desirable by maintaining a very high resale value. Instead of worrying about quick sales, many foreign companies have gradually built up large faithful markets.

The Simca Aronde is one of the finest engineered economy sports sedans produced. If Chrysler does want a car to suit contemporary American tastes, they can fool around with Simca's six-passenger 8. But, let them keep their hands off the Aronde.

Bob Applebaum — Brooklyn, N.Y.

Gentlemen:

For heaven's sake! Don't let them put fins or otherwise Detroit-ize this wonderful little car. Simca already has the cleanest, most beautiful production economy car—look at my '58 Oceane.



Perhaps Chrysler should concentrate on this model by adding a sedan to the available coupe and convertible. But please, please—no fins or chrome-nicks!

Henry Knox — Los Angeles, Calif.

Gentlemen:

Please tell Chrysler to leave Simca alone! I have just bought a Simca—I like it fine just as it is. One of the main reasons I bought it is that it is so different from the usual run of Chrysler products.

I do *not* want a "wedge-shape," I do *not* want a chrome Christmas tree, I do *not* want an automatic monster. I *do* want quality control, easy handling, and a reasonable measure of economy.

Sheldon S. Voorhis — Chapel Hill, N.C.

BOON FOR ARTHRITICS

Dear Editor:

There are many drivers who suffer while driving because of arthritis in the hands. The new cars are not helping this situation because the diameter of the rim of the steering wheel is becoming smaller and smaller every year. An arthritis victim just can't close his hands tight enough on these wheels for safe and comfortable driving.

I corrected this situation by adding bicycle handlebar grips to the rim of the steering wheel. To do this it is necessary to cut the closed end off the grip. Next the grip should be slit lengthwise. Now, by opening this slit

the grip can be slipped over the steering wheel rim. These grips are taped or cemented at the spots on the wheel that are used most frequently when driving. Now we have a larger diameter for a more open grip.
Arthur R. Tanner Jr. Poughkeepsie, N.Y.

IT'S NOT THE SPEED

Dear Sir:

"Speed Kills!" spearheads the campaign all over this country against needless slaughter on our highways. Yet, if the accident reports are studied, it will be found in a vast majority of cases loss of control of the car is actually responsible. Someone fails to negotiate a curve, or is unable to get out of the way when an accident is about to happen, or brakes completely fade on a mountain road, and—we have some more statistics.

Give the motorist a responsive, controllable automobile, and our accident rate will fall amazingly. When the roadability and handling problems are licked—then we can reach for speed and acceleration.
John A. Moody Wiscasset, Me.

Dear Mr. Woron:

I would like to stimulate and encourage a concerted effort on the part of some organization (AAA, National Safety Council, or government agency) to get our mounting traffic problem scientifically analyzed. By supporting traffic research of a high scientific caliber, I feel results could be obtained which would aid in the daily flow of traffic on our overcrowded roads. Certainly in this day of conquering space we cannot be content with meeting our traffic problems in the antiquated "put on a lower speed limit" approach.

Most traffic regulations must be aimed at preventing accidents, but it seems that the present-day traffic laws could be compared to an attempt to prevent robberies by passing a law prohibiting anyone from carrying more than (say) $5 with him at any time.

The best solution is probably driver education, but even this isn't being approached on a satisfactory scale. It seems that a full-scale study would be appropriate to evaluate the problems in present-day and future heavier traffic flow to provide recommendations for improvements.
J. R. Brown Pittsburgh, Pa.

THE OTHER SIDE

Dear Sirs:

As an auto mechanic in a new car dealership and a long-time subscriber to MT, I cannot help but be distressed at the remarks made by your readers, and at times your writers, against mechanics.

Many of us do our level best (though it isn't always easy) to satisfy our customers. I have turned out many jobs in the past few years when it actually hurt me to give the customer his bill—the charges were painful to anyone's budget—but legitimate.

In view of the diminishing flow of young men into this trade (ask the factories and employment experts) and the exodus of the skilled from it, you'll find a lot of worry about where tomorrow's mechanic is coming from. Not only will better wages help—but a public enlightened to the fact that mechanics are decent, trustworthy people.
Dean Colley Chesterton, Ind.

YOURS FOR ACCURACY

Dear Editor:

I refer to the letter in your October issue, giving Plymouth credit for introducing the steel-bodied station wagon.

Have you, Mr. Jansen and the others forgotten the all-steel-body Willys wagon whose popularity induced Chrysler to come out in '49 with the Plymouth Suburban?
W. Gregg San Antonio, Tex.

THE RUMOR MILL

"Engineers are working toward a transmission that will permit an engine to operate at its most efficient constant rpm, much the same as variable pitch propellers in airplanes keep the engine at almost constant speed when cruising."
TRUE—This device may not be too far in the future. At cruising speed it would permit the engine to operate at its peak operating torque rpm, or most efficient operating speed, yet maintain a constant road speed without varying engine speed.

"A variable compression ratio engine is in the works. It will enable the engine to use a part of the combustion chamber under highway operating conditions and a greater part of the chamber under extreme load conditions."
TRUE—The idea of this arrangement would be to provide higher compression and greater efficiency when the car is cruising at 50 or 60 mph. However, for jackrabbit starts or other extreme load conditions, the larger combustion chamber would reduce tendencies to ping. This should provide greater economy and efficiency at higher speeds and permit the use of lower octane fuel under all conditions with no loss of performance.

"Some cars for 1960 will have built-in periscopes that serve as rear view mirrors rather than the present mirrors."
TRUE—Maybe not in 1960, but it seems likely. With lower cars the problem of rear view mirrors mounted in the center of the dash or dangling from the top of the windshield where they obstruct forward vision is real. A periscope looking back over the roof with a viewplate above the windshield is definitely on its way.

"Flathead sixes are about to go."
VERY LIKELY—Best word is that Chrysler has an overhead six in the works for 1960 to replace the present Dodge and Plymouth flatheads. That leaves American Motors and Studebaker with this type powerplant. AMC already has a very efficient ohv six used in the present Rambler Six models which can also be stuffed into the American.

SPOTLIGHT ON DETROIT

by Bill Callahan Detroit Editor

POSTED PRICES on 1959 automobiles, which are mandatory under the new Federal Automobile Information Disclosure Act, will help you as a buyer. They will not, however, eliminate the need for good sound bargaining on your part if you want to get the most for your dollar in the years ahead. The purpose of this act was to do away with the pernicious practice of price misrepresentation, which enabled the dealer to offer what appeared to be very attractive allowances for used cars accepted in trade, or equally attractive "discounts."

USUAL PRACTICE on the part of the dealer who indulged in such didoes was to "pack" his prices with endless extra charges at rates far beyond the actual cost of these articles to him. With this hidden profit margin to work with he could offer some rather fantastic "bargains" that made the conscientious buyer a little ashamed to take advantage of so big-hearted and gullible a merchant.

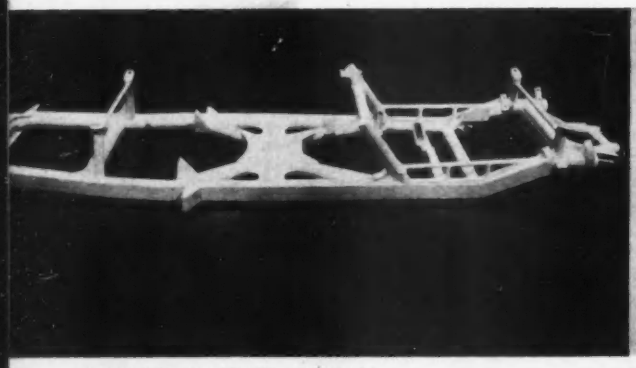
THE NEW LAW requires that the manufacturer's recommended retail selling price be affixed to each car leaving the factory. All factory-installed extra items not included in the basic price of the car must also be shown and the recommended retail price for each item must be listed. The basic car price will include reimbursement for excise taxes paid by the maker and suggested dealer preparation and conditioning charges. Other information shown will be: the make, model and serial number; the final assembly point at which the car was put together; the name and address of the dealer to whom the car was shipped or other delivery point in event the car was sent to other than the dealer's regular place of business. It also shows the method of shipment (convoy, truck, rail or other).

CHARGES NOT SHOWN include: gasoline, anti-freeze, dealer-installed accessories, license fees, state and local taxes. These items are added to the recommended retail price by the dealer. While the pattern of price placards will vary with makes, and accessory listings will vary with models, the information from each manufacturer must be complete and dealers are not permitted to modify or change this information in the field. These placards in most cases will be affixed to the rear side windows of the car.

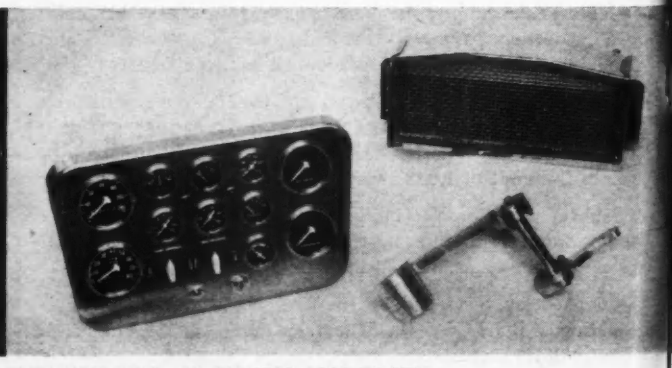
PRICE FIXING is in no way involved. The dealer is not constrained to sell the car at the recommended retail price. He can charge more, or he can sell for less. The buyer is under no obligation to accept all factory-installed accessories, but in this case would probably have to order a car with unwanted items eliminated, delaying delivery. Future used car allowance offers are likely to come as somewhat of a shock to the prospective buyer, but it is within this area that bargaining must take place. The prospective buyer should first check to make sure that the car serial number and model agree with the information shown on the price placard. From this point on he is on his own. It's then his salesmanship is pitted against that of the dealer to determine how much or how little he will receive for his used car, or how much discount will be given if no used car is involved.

THE ARGONAUT CORP., of Cleveland, Ohio, has been in the process during the last several years of designing a line of super-fine automobiles for a rather limited and discriminating clientele. Sketches of announced body styles (see accompanying drawings) have now been made public, and the frame and a few hand-finished component parts have been on display recently at Argonaut engineering shows. Following a custom that was in vogue in the days when expensive chassis were being built for custom body creations, Argonaut plans to offer seven Italian-built aluminum bodies on their own chassis. Only the finest material and workmanship will be tolerated in these cars, which are expected to sell for $17,000 to $20,000.

AMONG THE FEATURES announced by the company are tubular steel frame, high-horsepower V8 engine with high-speed valve gear, hardened crankshaft, oil cooler, torsion bar front suspension and driver-controlled shocks. Twin master cylinders and stainless steel brake lines will operate super-size sintered iron linings in flanged brake drums, and a polished stainless steel muffler and exhaust system and fuel tank are offered. All bolts are aircraft type with stainless steel nuts. Full instrumentation and racing tires are standard on all models.



TUBULAR FRAME OF THE ARGONAUT



INSTRUMENT PANEL, OIL RADIATOR, FOOT THROTTLE

Price label required on '59 cars still leaves room for "horse trading."

Detroit keeps a watchful eye on public reaction to new car size, styling.

Tyrex tire cord debuts on '59 cars . . Argonaut announces 7 body styles

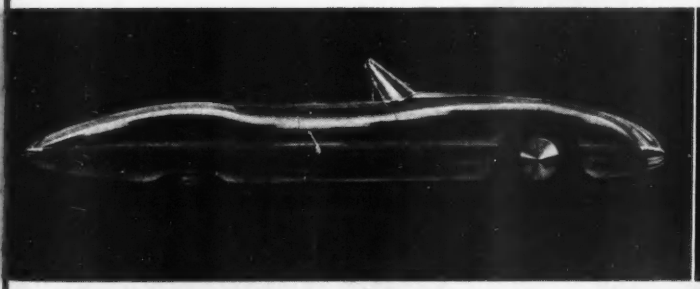
HALO TIGHTNESS seems to be bothering some of the big-wigs in the automotive industry as it moves into its 1959 sales season. Up to now, anyone who dared suggest that American cars are too big, too long, too low and too costly to buy and operate was considered a heretic. Times seem to be changing. At a recent Chevrolet press preview, Ed Cole, Chevy General Manager, stated: "We have not purchased one pound of material for a smaller car." Pressed further as to whether this statement could be applied to tools and dies, Ed answered, "No." At dinner that evening, he indicated that Chevy has a small car up to the faucet stage where about all that would be required would be to open the spigot—if Chevy became convinced that a smaller car is needed. "However," he added, "the fact that we are on top of this does not mean we will build such a car. As you know, we had one in the works as long ago as 1947, and the project was dropped at that time so far as the American market was concerned."

FORD IS LOOKING too, as is evidenced by the fact that it is going direct to the consumer through Dr. George Gallup to find out just what is wanted. Gallup has called in 400 citizens from all walks of life to discuss this same problem and endeavor to learn what the public thinks of today's cars, and what they would like in the future. Present designs are based on a constant study of consumer likes and dislikes in the past. These have been confirmed to a great extent by sales trends over the years, but—these moves indicate there may be some concern as to whether the industry's self-imposed halo may not have slipped down over its eyes.

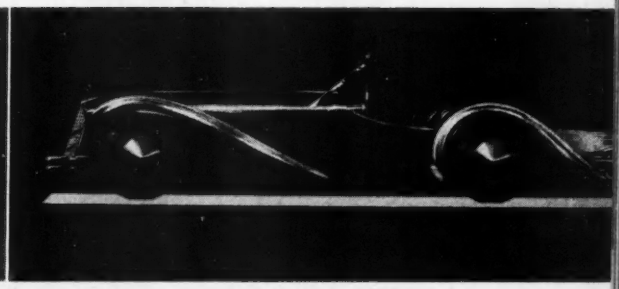
CHRYSLER APPARENTLY shares some misgivings in this regard also. In an advertisement in the *Detroit News* late in September, Chrysler Engineering was seeking: "Chassis design cost analysis engineers to initiate and coordinate chassis design studies on new designs and proposals. Also chassis engineers for preparation, analysis and coordination of advanced design proposals, future model series, summaries and scheduling." This makes us wonder, "What's cooking?" L. L. Colbert, Chrysler president, recently said his corporation was studying this trend very closely and would be ready to move if, and when, the time came.

continued

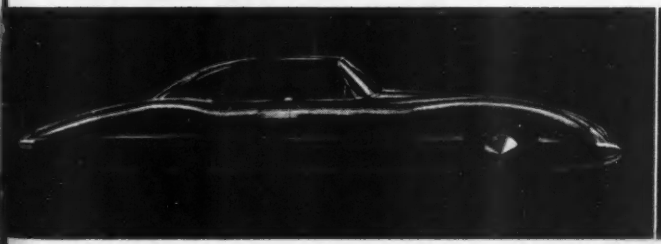
ARGONAUT BODY STYLES



FIVE-PASSENGER CONVERTIBLE

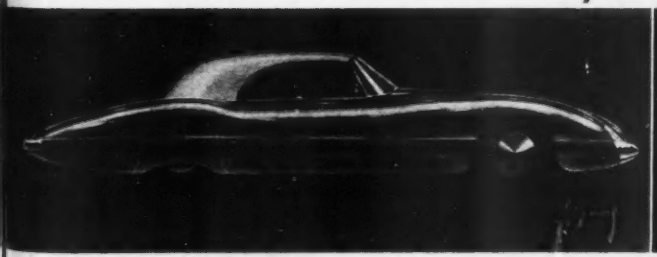


THE "TEXAN"



FIVE-PASSENGER SEDAN

EIGHT-PASSENGER LIMOUSINE



FORMAL FIVE-PASSENGER COUPE

ARGONAUT "SMOKE"

Spotlight on Detroit

continued

TYREX, a new tire cord used in many original equipment tires for 1959, according to Ed Cole, General Manager of Chevrolet, will give better performance than many of the premium tires now on the market. The new cord is a rayon derivative tempered to materially reduce the tendency in rayon and nylon cord to stretch and cause what the industry terms "morning sickness" in tires.

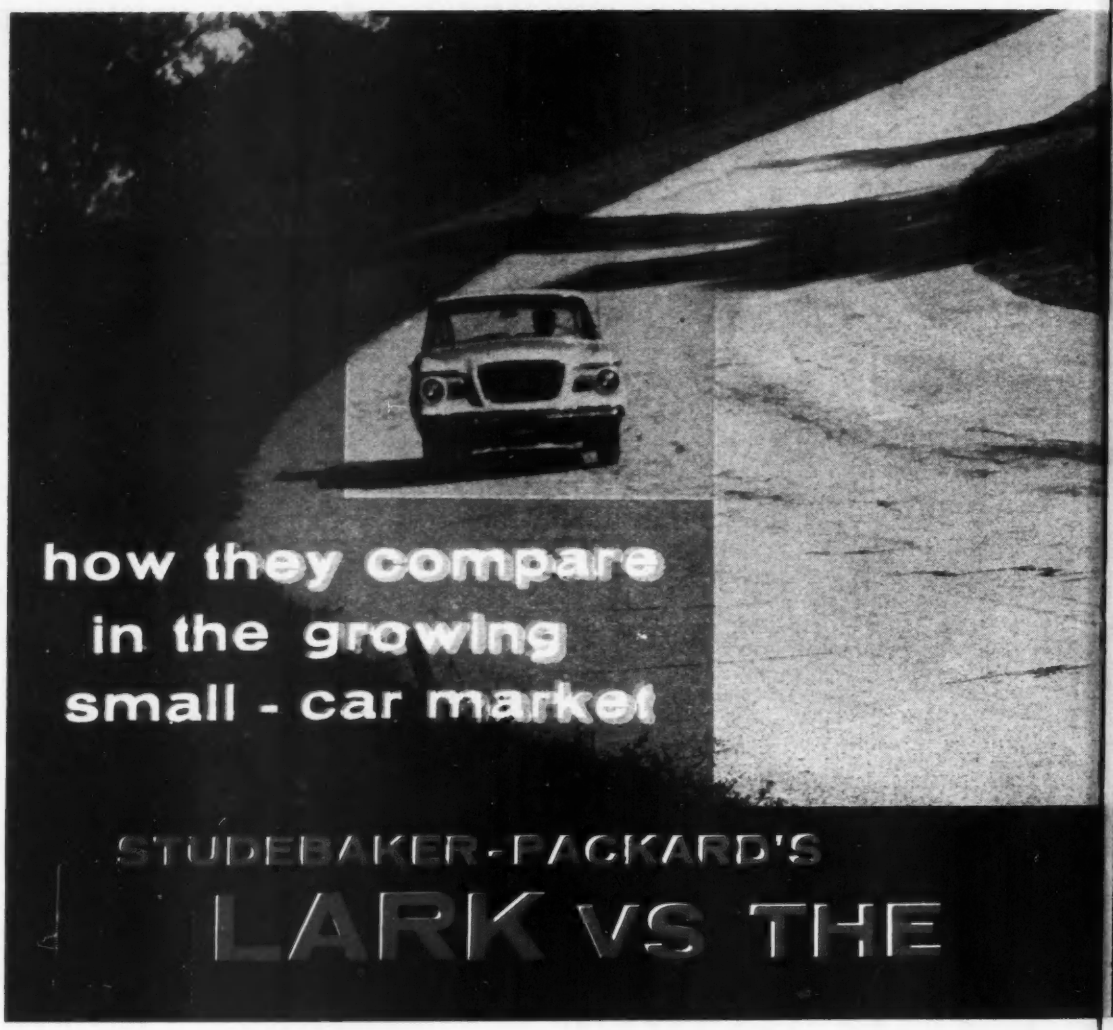
LONG, HARD DRIVING, Cole explained at a recent Chevy press meeting, heats up tires and increases the tendency of stretchable tire cord to "grow." When the car is stopped and the tire is permitted to cool, the weight of the car keeps the cord extended at the point of contact with the road. This results in a flat spot on the tire causing a thump for some time after restarting. The stretchable cord also causes "squirming" of the tread at the point of contact which increases wear, he added.

THE TEMPERING PROCESS used in Tyrex results in a lighter weight, stronger cord with greater resistance to impact, yet more flexibility to provide a softer ride. Because the cord is less prone to stretch, rolling resistance is lowered and there is less power loss. Cole estimated that with the new tires as much as one horsepower less would be required to drive a car at 50 mph. **/MT**

Skimming through Grosset and Dunlap's handsome *Auto-Parade* brought back memories of a first childhood look at a Christmas toy catalog. The sight of 300 color photographs of nearly every automobile manufactured, including many rare sports and competition models, is enough to overwhelm the motoring enthusiast.

Produced and printed in Switzerland, where fine color reproduction is a tradition, the book is more than a collection of beautiful photos. There are up-to-date specifications and prices in six languages—English, German, French, Italian, Spanish and Portuguese—plus road test results on the better known makes by some of Europe's leading automotive writers.

At $9.95 it is a photographic treasury which captures the beauty and excitement of the world's automobiles.



how they compare in the growing small-car market

STUDEBAKER-PACKARD'S LARK VS THE

Test Reports by Charles Nerpel, MT Technical Editor

JUST ABOUT NEW CAR ANNOUNCEMENT TIME, there are sudden weather changes throughout the country. Crisp fall days begin to break up the monotony of humid hot spells, and rain spatters at unpredictable times. New models have to be tested when and where they are ready and MOTOR TREND, working with deadlines far in advance of publication, goes where the cars are, usually the factory proving grounds, for initial tests. South Bend, Ind., home of Studebaker-Packard Corp. and Notre Dame football, was in direct line with a rainstorm sweeping down from Canada when the road tests of '59 Studebakers scheduled by MOTOR TREND were ready to start.

Touring the rainswept high-speed course at night in the V8-engined Studebaker Larks with test drivers George Dion Jr. and Bill Massey was a revelation in speed, handling, weather protection and visibility. George and Bill are two of the night shift factory drivers who put cars through endurance tests. Theirs is a rather lonely assignment, and it is not hard to hitch a ride to break up what they call a monotonous day's work.

Starting at 3:30 P.M., they check over the cars and head for a four-hour stretch on the speed course, which consists of a rough 70-mph maximum straight heading into a slightly banked 70-mph turn, then a long smooth stretch where the only limit is the driver's ability to make another slightly dished sweeper back on to the rough stuff. Hour after hour, three miles per lap, with the rain pelting the windshield and making a dancing path of the course in the headlight beams, these drivers showed us what they and the cars they test are made of. With vents open, windows closed and wipers going, we enjoyed normal-tone conversation, broken only when I held my breath as they wheeled into those wet corners at speed—but they made it. These little cars stick like glue without fighting the wheel or breaking loose in the rear.

Here were production cars, all new models at that, and the engineers had obviously solved the handling problem that always plagues a new design. It looked too easy to be convinced without our sliding behind the wheel and trying it. Driving the same speed pattern (with a few hot laps for fun) we found that same relaxed solid cornering in the rain that the test drivers had demonstrated.

After the lunch-box supper break, it was back to work—but not on the speed course this time. Within an hour or so after total darkness, high-speed driving is periled by deer wandering out on the course, so the last half of the shift is driven on what is known as Route No. 1. This is a rough, winding up-and-down-hill course with a bone-jarring approach to a 14 per cent grade and a 50-mph maximum speed—again three miles per lap.

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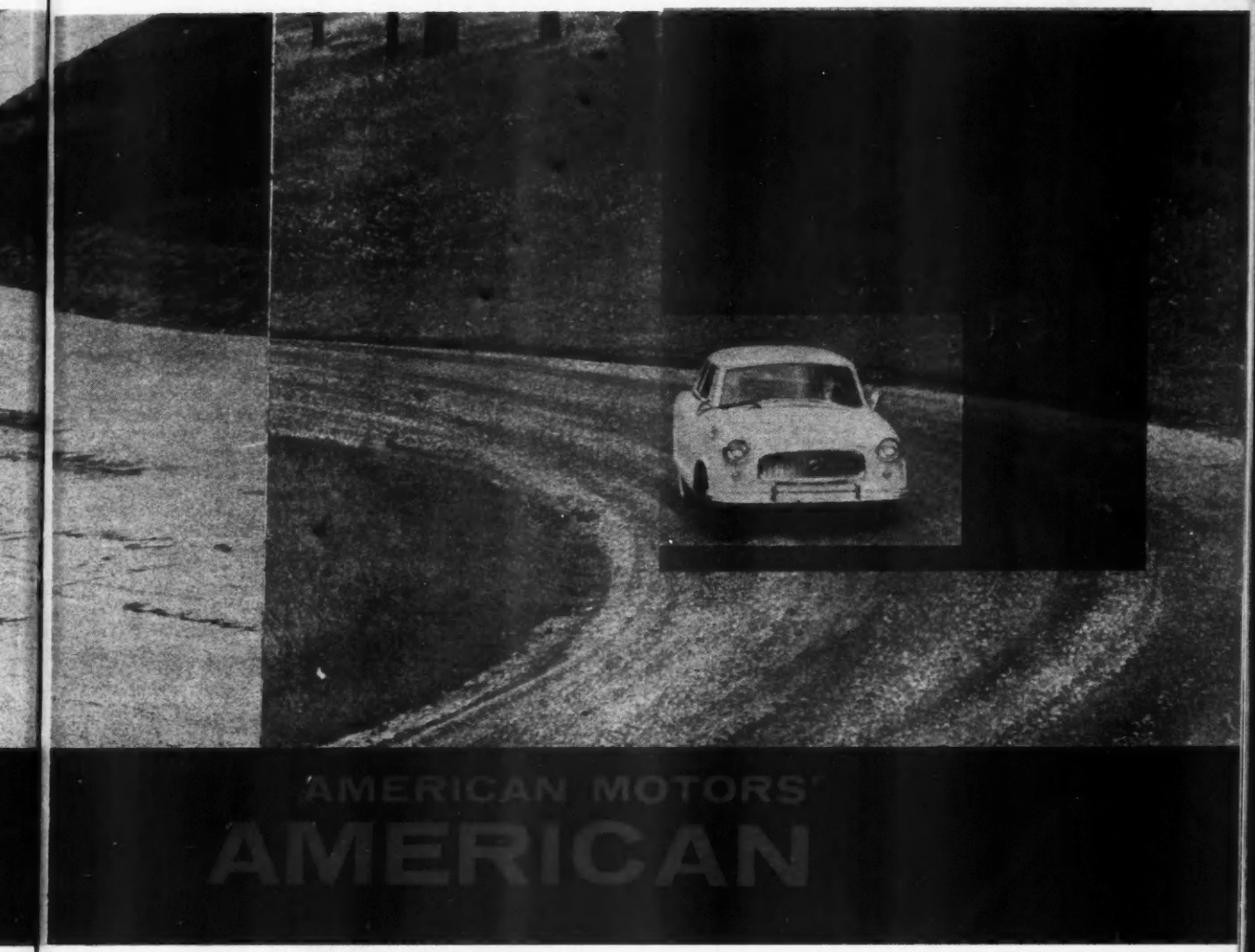

Churchill-Romney Interviews by Bill Callahan, MT Detroit Editor

KENOSHA, WIS. IS NOT TOO FAR from South Bend, but between the airlines, the taxicabs in Chicago and the North Shore railroad, the trip takes about four hours. In case the name Kenosha is a mystery, it is the home of the American Motors factory and the location of the proving grounds where MOTOR TREND tested the '59 Rambler American.

Weather again was against us, but it provided much the same conditions as encountered in South Bend, so the comparison tests would be on a little more equal basis. The anemometer in the engineering office showed winds at 25 mph with gusts up to 30 mph as we wheeled a six-cylinder flathead American out on the rain-spattered speed course for fuel tests. The stock speedometer was about eight mph fast at all speeds, but American Motors' 1/5-gallon fuel tester had an odometer driven by the fifth wheel that provided very accurate mileage readings. The wind certainly had its effect on fuel economy, for downwind the car produced as high as 23.3 mpg, but bucking those gusts cut it down to 19.5 mpg. In overdrive the gas mileage improved with downwind runs at 50 mph giving 25.3 and upwind tests getting as low as 22.8 mpg. This is still pretty good for a steady 50-mph average with a 195.5-cubic-inch engine developing 90 hp and running regular gasoline.

Slowing to a 35-mph maximum for our four-stops-per-mile simulated city driving cut the fuel consumption to an average 16 mpg without too much wind effect. Just out of curiosity, we left the fuel bottle running during some acceleration tests and proved what we always knew—jackrabbit starts sure eat up the fuel. Zero to 60 times averaged 19.3 seconds with stick shift, just a hair over those for the Studebaker Lark, despite the fact that we had 26 more inches in the American engine.

The American's steering, four turns lock-to-lock, is easy and positive, and touring the speed course in the rain gave a sure-footed feeling much like that of the Lark under the same conditions. Once the rain stopped we had a chance on the winding, hilly handling course, most of it loose gravel, to try the stability of the little 100-inch car. American Motors' unit body-frame construction seems to eliminate twist and looseness that rough roads invariably produce in conventional cars. Handling and braking on the gravel were better than average, indicating good balance, while the ride, even when plowing through water-covered chuckholes, was firm but good.

A braking area of 139.5 square inches provided 11 straight panic stops from 60 to 20 mph before pedal pressure had to be increased. The brakes worked just as well after several dunkings in the puddles left by the early morning rain.

The 1958 American was so successful that American Motors

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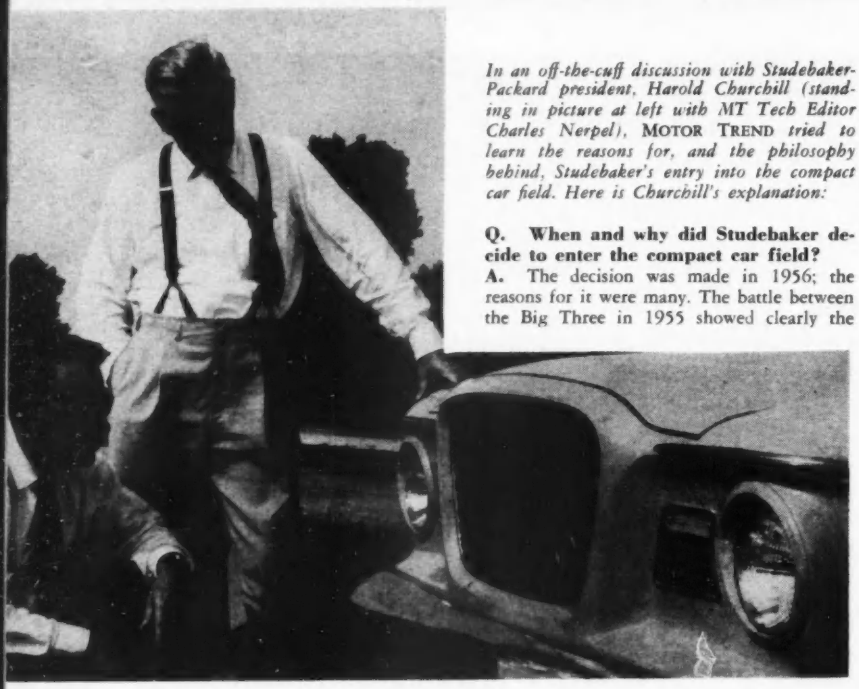

In an off-the-cuff discussion with Studebaker-Packard president, Harold Churchill (standing in picture at left with MT Tech Editor Charles Nerpel), MOTOR TREND *tried to learn the reasons for, and the philosophy behind, Studebaker's entry into the compact car field. Here is Churchill's explanation:*

Q. When and why did Studebaker decide to enter the compact car field?
A. The decision was made in 1956; the reasons for it were many. The battle between the Big Three in 1955 showed clearly the difficulties facing the so-called independent manufacturer in meeting that competition head-on. Also it became clear that the Big Three would offer increasingly larger and more ornate packages and forsake that large part of the market they previously served—the low-priced field. This would create a supply vacuum which no American manufacturer except American Motors was in a position to fill.

Q. How big do you think the market is for smaller cars?
A. That depends upon how well our products fill the need. We don't think the American buyer wants a midget car, nor does he want a "cheap" car. Midget cars will continue in demand among buyers who imagine that others look at them with envy and admiration as they drive down the highway. Likewise we believe that there always will be a market for larger cars to serve the purpose for which they were designed. We and American Motors are aiming at a practical, quality product that is not out of place as *the* family car and also makes sense as a second car. The market will expand as more people realize that wheelbase and weight are not essential to good handling, comfortable riding and safe operation.

STUDEBAKER LARK— The

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When the drivers pull into the garage at 11:30 P.M., the odometers usually show about 270 miles. Gas consumption has been consistently between 19.5 and 22 mpg for both the stick shift and the automatic, and this with the 259-cubic-inch 180-hp V8 that showed 105 mph on those wet straights with 350 pounds of ballast in the back seat.

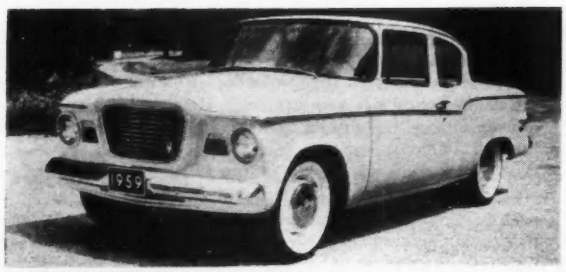
It was back to the course in the early morning with the bright sunshine that always seems to follow a heavy rain, to make some acceleration, braking, speedometer correction and fuel tests on the Lark six-cylinder, after making some timed runs on the V8s, this time without ballast. Zero to 60 times of 10 seconds with a stick shift were only slightly better than the 12 seconds with automatic transmissions, but it took 18 seconds with the stick shift flathead six to reach 60 mph.

So much for the playing around; now for the real business at hand—testing the six-cylinder Lark. The speedometer showed that through the range of 30 to 60 mph we were only two mph faster than our fifth wheel electric speedometer, so it was close enough to use the stock odometer for fuel consumption tests. A 1/10th-gallon burette with a means of switching it to the carburetor was used with standard or regular fuel. Five consecutive runs at a steady 50 mph produced 18 mpg, but shifting into overdrive over the same course brought the mileage up to 20 mpg. Adopting a pattern of four stops per mile with a maximum of 35 mph to simulate city driving, the little 169.6-cubic-inch, 90-hp flathead gave a consistent 18 mpg.

Studebaker has not released any gross weights for their new cars but they are considerably lighter than the average Detroit product. Braking, so much affected by weight, is more than adequate and the 147.4 square inches provided 10 panic stops from 60 to 20 miles per hour before there was any noticeable increase in pedal pressure. Just to be on the safe side, the four-door V8 has 172.4 square inches of lining surface to provide extra safety for the heavier engine, body, and passenger load.

STUDEBAKER'S LARK IS NO HALF-HEARTED, rehashed attempt at something new for 1959. It is a completely new and different package designed and built for what South Bend hopes to be a

FOUR-DOOR SEDAN



TWO-DOOR SEDAN

TWO-DOOR STATION WAGON

Q. Did the growing popularity of small imported cars influence your decision in any way?
A. Yes. But only to the extent that it confirmed our conviction that many people wanted a more compact car, easier to handle, easy to park and more economical to operate. This demand for economy was further confirmed to us by the acceptance of our Scotsman last year, although we knew the Scotsman was not the final answer.

Q. Can you compete price-wise with the small imported car?
A. Yes—with comparable imports, not with the midgets.

Q. American Motors said last year that it could make a profit on a production of 120,000 units; what would be your break-point?
A. We can make a profit on fewer cars than that but I can't be exact because that gets into the area of forecasting profits. We don't want the public to think we are "blue-skying" our program, but if we were not only confident but enthusiastic about this program we would not be here.

Q. What effect will your entry into the smaller car field have upon American Motors?
A. We sincerely hope that our move will complement rather than damage the acceptance of their excellent products. The more compact U.S.-built cars we can get on the road, the more buyers who will investigate their virtues. The more who investigate, the more we can convince.

Q. Many American car makers dismiss the imported car as a fad. Would you agree?
A. Not completely. I think a fad is something that people go for without too much rhyme or reason. I think in imported cars at least there was some reason. People wanted smaller, more economical cars. The big American used car did not fill either bill. Even though the used car's initial cost may have been comparable, it was still a used car. The differently designed imported car answered both points and at the same time established its owner as a man of discriminating taste rather than as a pinch-penny. Outside of Rambler no American car came anywhere near meeting his needs.

Q. Will the small U.S. car put the imported car out of business?
A. No. There will always be a market for imported cars here just as there will be a market for bigger American cars. That is the reason we are continuing the Studebaker Hawk line. Whether it will expand or contract depends upon how well we design our smaller cars to meet U.S. needs. We feel that average Americans want a car of slightly more generous proportions than some imports. They want complete instrumentation, comfortable, roomy interiors, attractive and somewhat lasting style, agile performance with good top cruising speed, ample trunk space, good economy of operation and accessibility to parts that require most service and adjustment. The initial cost must be reasonable.

Q. Do you expect competition from the Big Three in the smaller car field?
A. We don't expect to put the Big Three out of business but we are shooting for a much bigger share of the overall market. If we, and American Motors, reach the goals we have set (and I think we will), there is no question the Big Three will look back over their shoulders at the market they have abandoned. But by then we will have established ourselves and we will be right in there pitching.

newest all-American smaller car

substantial hunk of the economy or "smaller car" market. Offered in four distinct models—a four-door sedan, two-door sedan, hardtop and station wagon—this well-appointed lively performer presents a fresh American-designed and -built vehicle with a European flair.

It is hard to decide whether to describe the Lark as a small big car or a big small car, for the makers have been able to provide adequate seating and so-called big car comfort on a 108.5-inch wheelbase (113 inches for the wagon) coupled with smooth ride, fingertip mechanical steering, good cornering and braking, high-speed stability and fuel economy.

Squeezing down overall sizes would be a simple way to design a small car if one could just shrink the passengers in the same proportion. Unfortunately, the manufacturer must depend on customers other than midgets to make his car a success. No six-foot-plus driver or passenger will find the Lark cramping his legs or his style, driving or otherwise, for by very clever use of seat and engine location, Studebaker has been able to provide roominess and luggage space on a short wheelbase and minimum overhang without a stubby box-like silhouette.

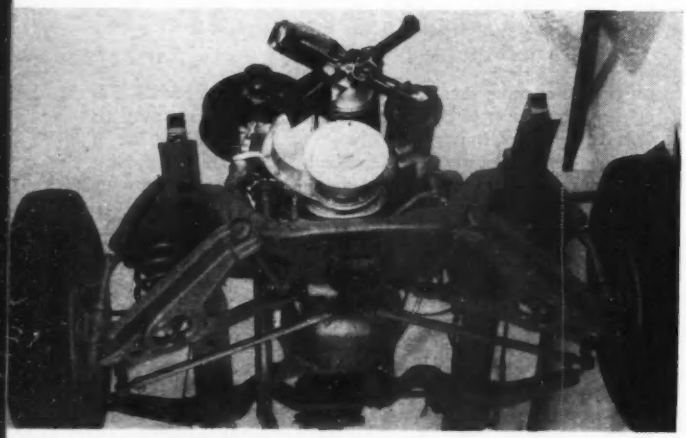
In the engine room, and we mean room, the six or the ohv V8 (optional on all but the two-door) nestles comfortably. No suffering the tortures of an exploring spelunker to change the plugs on these engines.

Studebaker is offering the four-door in either six- or eight-cylinder, the hardtop in V8 only, and the two-door in flathead six only, but other options—manual transmission, overdrive or automatic transmission—are available across the board.

TWO-DOOR HARDTOP

LARK CONTINUED

DRIVER COMFORT is provided by adequate legroom, good instrument grouping, firm seat back, and easy steering.



CONVENTIONAL FRONT SUSPENSION uses hydraulic shocks inside coil springs and center-point steering. The huge box-section cross-member is more than adequate to stiffen frame and support engine and suspension. The frame rails extend to provide bumper mounts.

Speaking of options, the third seat available for the station wagon is a joy to behold and no wagon enthusiast, especially one with kids, can afford to pass this one. The rear-facing seat folds completely into a flat rubber-covered floor without any need to remove it or store the cushions. A flip and your six-passenger wagon provides seating for two more adults or as many kids who can win the fight to ride in this "observation car" area.

DRIVING THE TWISTING ROAD COURSE on the proving grounds gives the test driver just about every road condition a motorist is likely to encounter on American highways. This sprightly car felt like it was running on tracks, so light was the steering in feel and response. Careless approach to the abrupt start of a 30 per cent test grade produced some bottoming, but hitting such grades within reason would never bottom the chassis or scrape the rear guards or tail pipe.

We were convinced that the test car had some form of power-assisted steering, so well balanced was the front suspension and linkage. One-finger operation, 4.5 turns lock-to-lock with the car standing motionless, will delight the feminine driver and ease the chore for anyone parallel parking. A slight understeer at high speed did not detract too much from the car's ability to go in the direction in which it was pointed.

Studebaker is obviously eyeing a growing but not too competitive market. American Motors closed their '58 production line after turning out 40,000 Rambler Americans, with their dealers still ordering more cars. The leading economy import registered 33,000 vehicles in the first seven months of 1958, with cars hard to get in some parts of the country and piling up on holding lots in others. If the potential market surveys are anywhere near correct, the decisions made by Harold Churchill of Studebaker and George Romney of American Motors might well pit the hottest and most successful 1959 competition between South Bend, Ind. and Kenosha, Wis.—and not in Detroit.

RAMBLER AMERICAN

...looking for a greater share of '59 car sales with mechanical improvements, a new wagon

continued from page 17

left the styling virtually unchanged for 1959. A two-door station wagon on the same 100-inch wheelbase has been added to the line, and it is a sharp-looking little utility car with passenger-car appointments. The second seatback folds flat against the seat providing extra carrying space. One of the advantages of unit construction is weight reduction. The wagon at 2560 pounds is only 85 pounds heavier than the sedan.

WHILE TESTING THE "SMALLER CARS" it would be only fair to include a car that is practically a twin to the American, and that is the Rambler Six. The Rambler is on a 108-inch wheelbase but offers a two-door hardtop, a four-door sedan, and a station wagon, plus an overhead-valve, 195.6-cubic-inch six-cylinder or an overhead-valve 250-cubic-inch V8 engine. Rated at 127 hp, the overhead six would certainly come under the "smaller" category and our curiosity prompted some acceleration and fuel tests. Acceleration from zero to 60 was just about the same as the American but this car was nearly 500 pounds heavier, which also affected fuel economy. Steady 50-mph speeds gave 18 mpg and 20.8 in overdrive. Four stops to the mile, going through the gears after each stop with a 35-mph maximum, showed our simulated city driving was giving 16.5 mpg. Regular fuel is specified for these cars as well as for the American series, so considering the savings over premium grades, these cars are cheap to run.

American Motors is convinced that their "smaller car" has a growing place in the American market. Few changes allowed them to get a good production jump on the rest of the industry, with a very low tooling cost. By the end of September one staging area on the outskirts of Kenosha had over 7000 American Motors cars—all new Americans, Ramblers and Ambassadors—in the process of loading on motor freighters for shipment to dealers throughout the country. Studebaker-Packard, with an all-new car, had their first 2400 Larks ready for dealer drive-away by October 4, with the production line just getting into full swing. Both manufacturers believe their products will help each other by making the buying public aware of a greater choice in domestic economy cars from well-established producers.

UNIT BODY FRAME combines very rigid construction, low cost, light weight

"The potential of the smaller-car market depends on how well we meet consumer requirements."

Rambler's 1958 success in an automotive "off year" has raised the question of whether this indicates that the American public wants smaller, less ornate cars. MOTOR TREND *put this question to American Motors' president, George Romney (above). Here is his answer:*

Q. What is the basic reason for Rambler's 1958 success?
A. It resulted from reviving competition in the industry by offering a wider range of cars for the consumer's choice in a category where previously there had been no choice. There has been a shift in buyer tastes. On the other hand, our basic society is changing. Today manufacturers have to cater to the consumer. His needs must be met and he can't be led around by a chromium ring in his nose. Along in the late '20s some shrewd industry observers concluded that the best way to win a substantial share of the volume market was to reach for the low-price buyer's ego just as surely as the Stutz Bearcat reached out to the rich man's son. This was a sound idea but in operation it resulted in a race among the Big Three to provide bigger, more powerful and more glamorous automobiles.

The large segment of consumers who want safe, sound, comfortable automobiles of a sensible size found nothing in the American industry from which to choose.

Q. Did the popularity of imported cars have any influence on your decision to offer a more compact car?
A. No. The Rambler was in existence before imported cars made any real inroads in the American market. We also offered the Nash-Healey sports-type car about the same time comparable imported cars were taking on here. The Rambler, however, was designed to meet American needs, whereas imported cars were accepted by a large group who had no choice among American products.

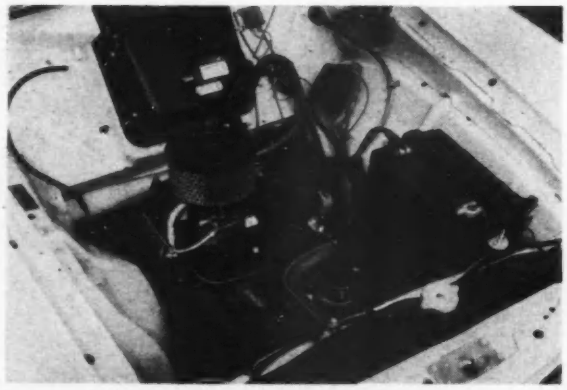
Q. Do you consider imported cars a passing fad?
A. I think that in 1959 imported car sales may come pretty close to their maximum annual rate in the United States. In general, the American public is unwilling to accept some of the important disadvantages inherent in small imports. Their useful space is somewhat too limited, their noise level is high, their performance less satisfactory, and as they get appreciable mileage on them, service disadvantages are likely to become noticeable. But the important thing about the success of the imported car is not its fad aspect but that it bespeaks the general failure on the part of U.S. industry to meet motorists' needs adequately.

Q. Do you think American Motors will do as well in 1959 as it did in '58?
A. We plan to do much better. Our program for 1959 calls for six per cent of the total anticipated market, or roughly about 300,000 units. We have improved our products mechanically and from a comfort standpoint, with modest styling changes which we feel give us more integrated styling. We have added a station wagon to the American line as a result of a write-in vote from owners. We have a strong, enthusiastic dealer organization that made money in 1958 while many others were showing losses.

Q. What do you think of Studebaker's entry into this field ?
A. We welcome them wholeheartedly because it confirms the correctness of our position. I understand their new car also is a quality product, so the consumer will have that wider choice I spoke of earlier. We wish them well.

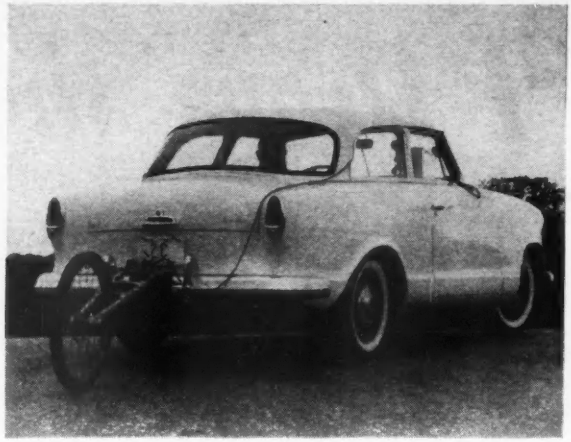
Q. Do you expect the Big Three to enter the smaller car field?
A. I would expect them to come back in the not too distant future—and it should be a lively battle. While the market is developing adequately for their standard car volume, they can subsidize their smaller car divisions. We don't worry too much about this, however, because when they do enter this field the power of their advertising will be felt in the market place but it would be focused on the advantages of the compact car. This should help to accelerate the market.

Q. How big do you think the smaller-car market is?
A. We feel there is a growing demand for a smaller, more compact car that provides Americans with all the comfort and safety factors of the larger cars plus greater handling ease, economy of operation and comparable performance, and more lasting styling. The market potential will depend upon how well we meet these requirements.



FLATHEAD SIX develops 90 hp, gives good gas mileage, and is well mounted for easy tuning and maintenance.

STATION WAGON has over six feet of linear space with second seat folded, gate closed. Headroom is 31 inches.



STUDEBAKER LARK vs RAMBLER AMERICAN

	LARK		AMERICAN	RAMBLER
	SIX	V8		
ENGINE	Flathead 6	Ohv	Flathead 6	Ohv 6
Bore and Stroke	3.0 x 4.0	3.56 x 3.25	3.12 x 4.25	3.12 x 4.25
Displacement	169.6	259.2	195.6	195.6
Compression	8.3 to 1	8.8 to 1	8.0 to 1	8.7 to 1
Bhp @ rpm	90 @ 4000	180 @ 4500	90 @ 3800	127 @ 4200
Torque @ rpm	145 @ 2000	260 @ 2800	150 @ 1600	180 @ 1600
TRANSMISSION	3-speed manual; o.d. (opt.) 3-speed automatic (opt.)		3-speed manual; o.d. (opt.) 3-speed automatic (opt.)	3-speed manual; o.d. (opt.) 3-speed automatic (opt.)
CHASSIS	Box section rail frame		Unitized body	Unitized body
Front suspension	Independent, with unequal wishbones and coil springs		Independent, with unequal wishbones and coil springs	Independent, with unequal wishbones and coil springs
Rear suspension	Solid axle, semi-elliptic leaf springs		Solid axle, semi-elliptic leaf springs	Solid axle, coil springs
Brakes	Hydraulic—147.4 sq. in. (V8 sed. and sta. wag. 172.4 sq. in.)		Hydraulic—139.5 sq. in.	Hydraulic—150.1 sq. in.
DIMENSIONS (Inches)				
Wheelbase	108.5 (wagon 113)		100	108
Overall length	175 (wagon 184.5)		178.3	191 (wagon 193.5)
Overall width	69		73	72.3

	LARK	AMERICAN	RAMBLER 6
ACCELERATION			
0-60 mph	6-cyl. 18.0 V8 10.0	19.3	18.0
45-60 mph	6-cyl. 7.8 V8 4.0	9.5	9.5
CRUISING SPEED	6-cyl. 70 V8 80	70	80
FUEL CONSUMPTION			
Steady 50 mph	6-cyl. 18/20 w o.d. V8 17.5 19 w o.d.	21.4/24 w o.d.	18/20.8 w o.d.
Stop-and-Go	6-cyl. 18 mpg V8 16 mpg	16 mpg	16.5 mpg

For a comparison of the Studebaker Lark and Rambler American with imports priced under $2000, see pages 58-59.

"I Drove the WORLD'S TOUGHEST

SIXTY-SEVEN CARS LINED UP along the famous Bondi Beach Esplanade. It was 10 A.M., August 20th, and for the next 18 days these 150 men and women would be facing a rugged ordeal: They would circle Australia for 10,500 miles, driving over dangerous, treacherous roads, encountering every known condition, in quest of the $35,000 offered for this—the world's longest car trial.

Almost 20 different makes of cars were represented, with Volkswagen and Holden heading the list, each with 13 starters. From overseas came five Japanese cars (three Toyopets and two Datsuns), six factory-entered Skodas from Czechoslovakia, a Porsche direct from Germany, and a Nash Metropolitan from New Zealand (driven, incidentally, by two women). At the last moment a Canadian entry was withdrawn, as was America's only entrant—Ray Crawford.

Also included were two Chrysler Royals, two Fords, four Ford Zephyrs, two Peugeot 403s, three Hillman Minxes, numerous Austins and Morrises, Rovers, Standard Vanguards, one Fiat 1100, one Renault Dauphine, and two Simcas.

Within 100 miles after the start, crews ran into an unexpected hazard—tight navigational sections made more difficult by the use of secret controls in average speed sections. Making the going tougher, heavy rain commenced to fall, and many of the secondary dirt roads became slippery and dangerous.

After 24 hours of continuous driving with only a one-hour meal break, the cars began to check into Melbourne, 900 miles from the start. Even at this early stage, more than half the field had lost points. Crews ate a hurried meal, and went to their hotels to utilize as much as possible of the eight-hour rest period allowed in this city.

From Melbourne, the cars headed north through flooded back roads and over many wide river crossings towards South Australia and Adelaide, the next major control. Again navigators were forced to burn the midnight oil as they plotted their course, and many lost points when they became bushed towards dawn.

A Ford Zephyr, driven by three members of the Victorian Police Car Club, skidded off the winding road and plunged down a 30-foot embankment. Fortunately, the crew scrambled out, dazed but unhurt, and following cars stopped to give assistance. An hour later the battered Ford was back in the trial with many battle scars to show for its experience. Despite the lack of a windshield and a rear window, it actually completed the trial.

Trial crews were a bleary-eyed collection as they drove into the compound area at Adelaide, with all but seven vehicles having lost points varying from two to 600. Four competitors had already retired through mechanical troubles.

The drive from Adelaide to Perth, under normal conditions, is one which only the keenest motorist would attempt. Almost 2000 miles in length, it is a dirt highway passing through only one major village, Ceduna. There are a half-dozen cattle stations along the desert route, where gasoline and oil may be procured, but apart from these, the only inhabitants are the kangaroo and wandering herds of sheep and cattle. Trial officials asked for a 48-mph average speed over this section, but at the last minute, when reports reached headquarters that the road was almost entirely under water, it was reduced to 43 mph.

The first 100 miles of the lonely crossing brought about further withdrawals. A Toyopet, which rolled, was so badly damaged that it withdrew at Perth. A Volkswagen, which also rolled, was righted and continued. Less than 50 miles farther on it flipped for the second time. This time the driver was injured, and the car was written off. A Simca and Skoda also capsized in the squelching mud, but after minor repairs each car was able to continue.

67 cars started — 34 finished. For 18 days and 17 nights drivers battled for 10,500 miles against rain, mud, bull dust, kangaroos, straying cattle, rocks and boredom.

TRIAL for Cars and Men!"

by Alan J. Gibbons

Despite the atrocious conditions, and though almost every car left the road, became bogged down, or experienced mechanical or electrical troubles through the continuous water, some competitors managed to reach the Perth control without further loss of points. Drivers of the big fast American cars even had time for an oil change and lube before checking in.

Once in the Western Australian capital city of Perth, drivers spent their time eating and sleeping. The 20-hour rest period quickly came to an end, and the following day they left for the 3000-mile run to Darwin via the worst country this continent possesses.

Before leaving the metropolis, crews were given a 90-minute maintenance period—a chance to repair damaged cars, providing they used only the tools carried in the car. Worn parts could be replaced, providing the sealed sections (i.e., head, gearbox, clutch housing, and differential) were not broken. Breaking a seal automatically carried a loss of 50 points.

That afternoon the cars thundered north along blocked-off roads at speeds up to 70 mph, but this easy going did not last long. Route instructions quickly led the cars along a little-used track formed in feet-deep loose sand. Over scrub-covered terrain the cars battled, with every second car getting bogged down. Crews set to work with shovels, winches and matting in an effort to extract their cars, and by late afternoon the field was spread out over 100 miles.

Then suddenly the terrain changed; the track became a quagmire, with water and deep mud blocking the way. Average speeds dropped to under 20 mph for those who were lucky enough to get through, and many cars quit with burned-out clutches and broken axles.

The greatest hazard was encountered late that night, when the track passed between two tidal lakes. A stretch of murky water and oozing mud 600 yards in length confronted the drivers, and it was not until a tractor was recruited from a nearby road gang that the last of the cars got through. By this time the water was more than three feet in depth, while tracks made by the tractor were more than a foot deeper.

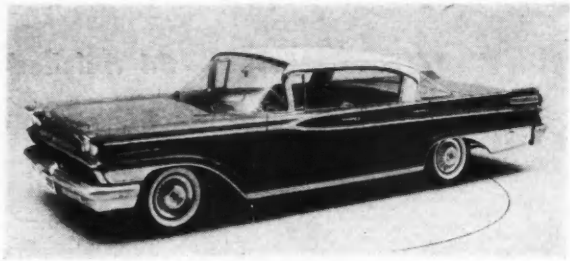
continued on page 67

PHOTOS BY EDWARD N. STEET

CREWS FROM following vehicles help boost Morris Major through hub-deep sand on long cross-country up-grade.

EVERY REMOVABLE ITEM is jettisoned to lighten load on rear axle bottomed in sand as crew prepares to dig out.

MONTCLAIR PHAETON COUPE



PARK LANE PHAETON SEDAN

MERCURY FOR '59...

by Bill Callahan
Detroit Editor

...offers a longer car with wider frame and tread, two different rooflines, and a gearshift lever to replace the pushbuttons.

IN AN EFFORT TO CORRECT a rather garbled competitive situation among its own lines, the M-E-L Division of the Ford Motor Co. is upgrading Mercury in 1959.

This year the Mercury will be even larger and more luxurious to spread the gap a little wider between it and the Edsel. It will be four inches longer (a total of 217 inches) in the Monterey and Montclair, two inches longer (222 inches total) in Park Lane models and 4½ inches longer (218.6 inches) in the wagon. Overall height has been reduced from one-half to one inch, but all bodies are one inch wider at the center pillar.

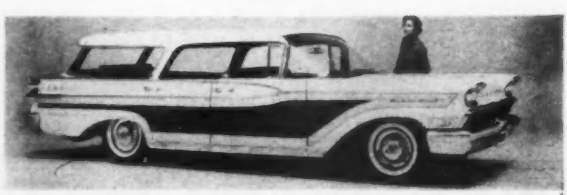
Wheelbase in the Montclair and Monterey models is increased from 122 to 126 inches and from 125 to 128 inches in the Park Lane models. The reason for this was to enable engineers to move the front axle and engine forward and thus lower the transmission hump in the driver's compartment. This hump now occupies only 50 per cent of the space formerly required, providing a flatter floor and more comfort for the passenger in the center of the front seat.

By moving the instrument panel forward six inches, more legroom has been added for front-seat passengers. The cowl point has been lowered 2½ inches to provide better forward vision, while the compound windshield extends far up into the roofline for a better view of overhead traffic signals. Windshield pillars designed on a more vertical plane and four-inch-wider front doors on four-door models aid entrance and exit.

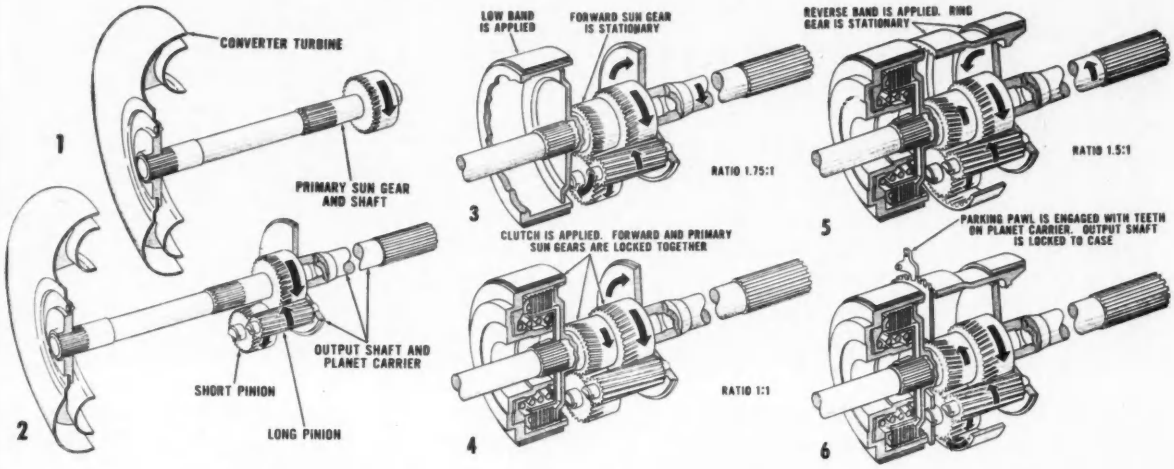
The use of a wide "cowbelly" frame with box section side members made it possible to narrow the door sills by 4½ inches in the rear entrance. This facilitates entry and exit and at the same time provides wider footwells in the rear. Lowering of the rear tunnel was accomplished by tilting the engine and transmission assembly downward at the rear so the lower rear tunnel was possible without use of a third universal joint.

To balance the greater length and wider cowbelly frames, tread has been increased one inch to 60 inches in front and three inches to 62 inches in the rear. Front suspension is by coil springs, and the rear semi-elliptic springs have been made longer and wider.

As in the new GM lines, there are two distinctly different



COLONY PARK STATION WAGON



TWO BANDS AND A MULTI-DISC CLUTCH ARE FEATURES OF NEW LIGHTWEIGHT TWO-SPEED TRANSMISSION

rooflines in the '59 Mercury. The cruiser roofs for hardtops slope smoothly back from the top of wrap-over windshield to the huge curved back light. In the sedan models, roofs are flatter and extend rearward in a cantilever overhang.

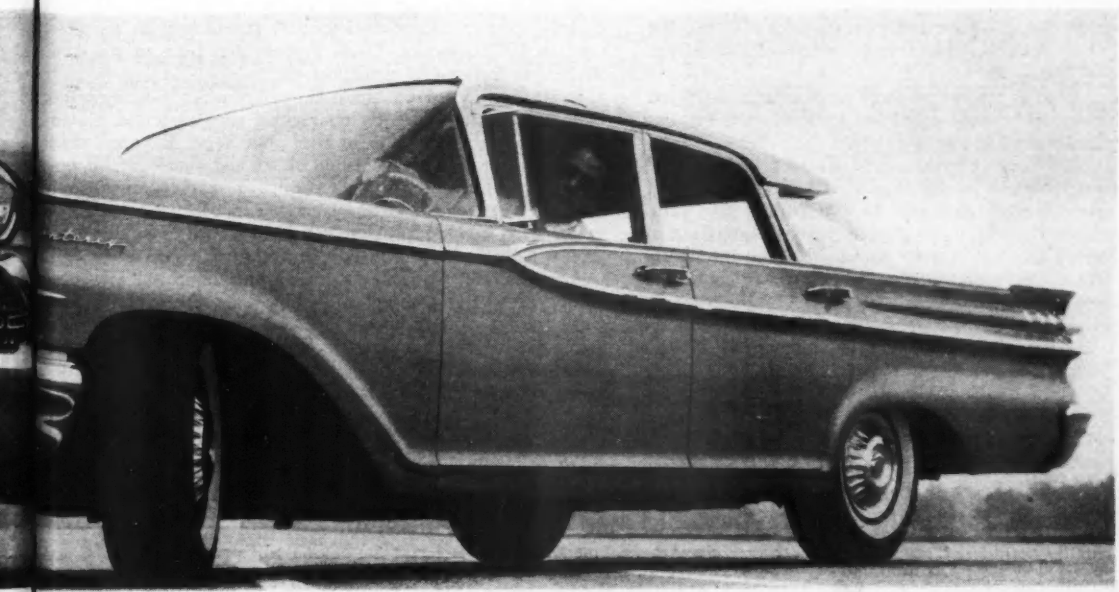
Mercury powerplants have been reworked to provide more efficient and economical operation, but unlike their counterparts in the Edsel-Ford lines, are not designed for regular-grade fuels. Contrary to some reports, the 383-cubic-inch and 430-cubic-inch Super Marauder engine with three two-barrel carburetors will not be available in 1959—at least as of this writing. The smallest engine in the line will be the 312-cubic-inch rated at 235 hp and 325 pounds-feet of torque, with a single two-barrel carburetor. The compression ratio is 8.75 to 1. Next is the 383-cubic-inch job with a single two-barrel carburetor, rated at 280 hp and 400 pounds-feet torque. The compression ratio is 10.0 to 1. The same engine with a single four-barrel carb develops 322 hp and 420 pounds-feet torque, using the same compression ratio. Biggest of the bunch is the 430-cubic-inch with single four-barrel carb, which develops 345 hp and 480 pounds-feet torque. Compression also is 10.0 to 1.

Two series of automatic transmissions are available—the Merc-O-Matic single range, and the Multi-Drive Merc-O-Matic Dual Range. The hydraulic controls for each series of transmissions are designed to match the torque curve of the engines with which the transmissions are to be mated. The poorly-positioned pushbutton controls for the automatic transmission have been replaced by a gear selector lever on the steering column.

The most expensive series—Park Lane—offers a two-door cruiser (Mercury's name for hardtop), four-door cruiser, and convertible. The Montclair has a two-door cruiser, a four-door cruiser and four-door sedan. The Monterey series (the least expensive) has a two-door cruiser, four-door cruiser, two-door sedan, four-door sedan, and a convertible. Station wagons, called Country Cruisers, include the four-door Colony Park, the four-door Voyager, four-door Commuter and two-door Commuter. The latter model is available in six-passenger only and is the only two-door station wagon in the medium-price field.

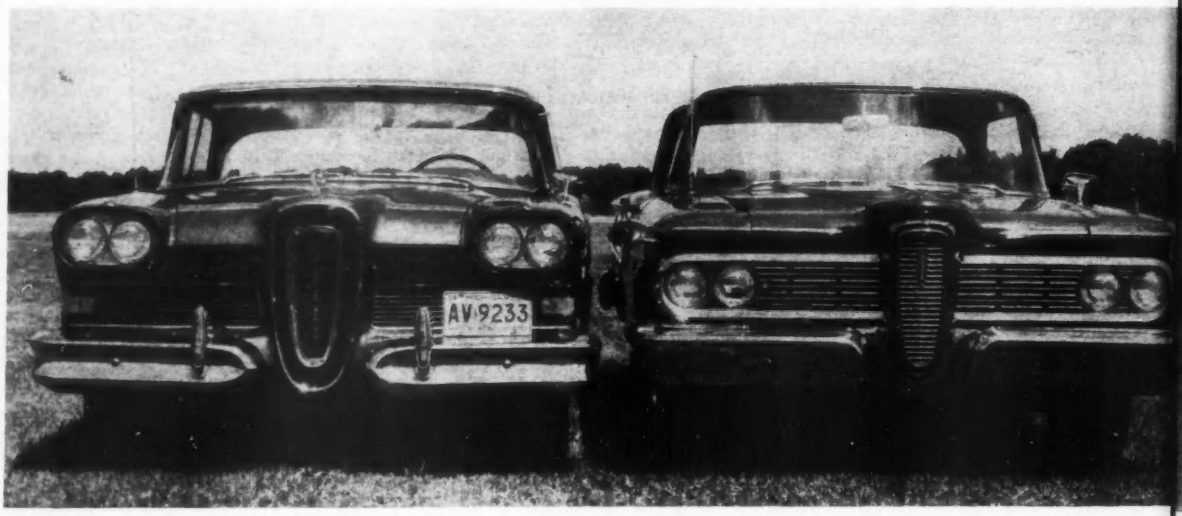
A brief ride in the Mercury brought out these facts: its handling is every bit as good as last year's car, it stays fairly stable on turns, the brakes are efficient, the acceleration is good, the ride is smooth (even over the Belgian Block roads at Ford's test track), it takes less steering effort (Mercury claims 50 per cent less for parking and 15 per cent less on the highway).

(See specifications on page 30)



EDSEL FOR '59...

...offers new front-end styling, an overhead valve six, a less bulky car, and a two-speed automatic transmission.



ALTHOUGH THE OVAL on the '59 Edsel is smaller (right), new horizontal lines on grille give it lower, wider look.

COMMITTED TO A FRONT-END STYLE they believe in, Edsel stylists have modified the automotive conversation piece of 1958 into a smaller but still distinguishable front design for 1959 that gives a wider look, despite the vertical center section. The oval opening is definitely smaller and merges into horizontal trim that makes it look more like it belongs there, but it is not hard to imagine a whole new line of jokes the wags are even now cooking up.

Economy-minded as the rest of the Ford company, Edsel has a six-cylinder option for the Ranger and Villager series that has all the specifications of the Ford ohv Six.

Price-wise, Edsel will remain a so-called "medium-priced" car, a field that is being invaded rapidly by the higher-priced models of the lower-priced three. In this overlapping price bracket Edsel offers a fourth choice to buyers, enabling them to select a car much different in outer appearance from the luxury models of Ford, Chevy and Plymouth (all of which bear a close resemblance to their less expensive lines).

The Edsel offering for '59 is limited to two series of passenger cars: the Ranger and the Corsair, both on a 120-inch wheelbase, and the Villager station wagon series. The Ranger series will include a two-door and four-door sedan, and a two-door and four-door hardtop. The Corsair series will offer a four-door sedan in addition to two-door and four-door hardtops and a convertible. Two Villager station wagons will be offered, both four-door, for six or nine passengers.

The 120-inch-wheelbase chassis is two inches longer than the 1958 Ranger models, but four inches shorter than the former Corsair. Actually, both series are five inches shorter than the somewhat bulky 1958 Corsair, but in some cases interior body dimensions have increased. Legroom in the front is almost two inches better than the '58 Corsair; legroom in the rear has been increased a full two inches. Shoulder room in the front remains about the same, with hiproom, both front and rear, slightly greater. Headroom is only a fraction of an inch less than in 1958 Corsairs. Trunk capacity has been upped from 27.7 cubic feet to 32.0 cubic feet.

In line with the Ford Motor Co. policy of providing engines that will operate efficiently on regular grade gasoline, all engines (with the exception of the Edsel Super Express, which has a displacement of 361 cubic inches and develops 300 hp) have been redesigned to provide this factor. Ford claims that only about five per cent of 1958 buyers demanded high-compression engines and high-performance equipment. So it looks like economy will be the byword in Edsel dealerships, too.

The engines feature high-lift cams for improved low-speed torque, less valve overlap, and improved carburetion. All engines (except the Economy Six and the Ranger V8) have hydraulic valve lifters. The stock engine in the Ranger series is the 292-cubic-inch V8 which develops 200 hp. An option is the six-cylinder, short-stroke ohv engine of 223 cubic inches and 145 hp. Respective compression ratios are Six, 8.4 to 1; Ranger V8, 8.8 to 1. The stock engine in the Corsair series is a 332-cubic-inch V8, which develops 225 hp and has a compression ratio of 8.9 to 1. The optional engine is the Super Express, with a displacement of 361 cubic inches and 300 hp. The compression ratio is 9.6 to 1, with premium fuel recommended, but Edsel says the engine will operate on regular gas.

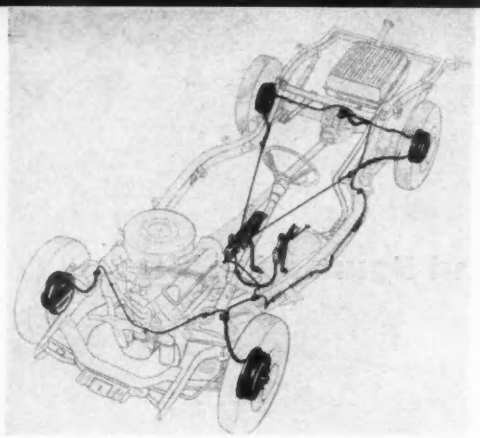
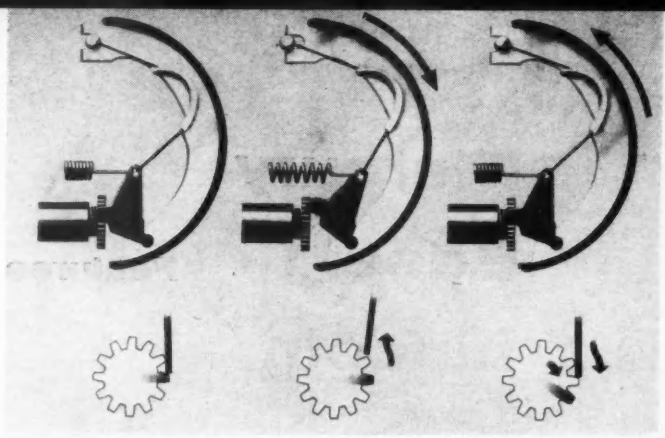


DIAGRAM SHOWS Edsel's power brake system.



BRAKE SHOES actuate self-adjusting brakes, retained from '58.

CORSAIR FOUR-DOOR HARDTOP

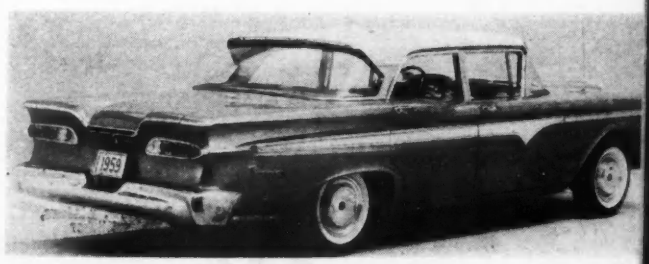
In the transmission department Edsel offers a wide range of options that coupled with optional rear end gearing and the low-speed torque of its engines provides high performance in speed ranges where it is needed. Probably the most interesting automatic is the Mile-O-Matic two-speed, which is offered at a lower price because it uses 25 per cent fewer parts than the Dual-Range and weighs 50 pounds less. It is contained in a one-piece cast aluminum converter housing and gear case. The drive is through the converter and planetary gears, which provide two forward speeds and a kick-down from DRIVE into LOW for passing. This transmission can be used with the 292-, 332- or 361-cubic-inch engines. The Super Express engine is teamed up with the Dual-Power-Drive transmission.

Frames of the Edsel are very similar to the heavy frame used on the Ford, with modified crossmembers to fit Edsel needs. Side members of the frame bow out into a wide cowbelly as wide as the tread. An X-member is added to the frame for convertibles. Front suspension is by coil springs and the rear by semi-elliptic leaves. The brakes are the same self-adjusting and automatic wear-compensating units introduced last year. Braking area is 191.1 square inches.

Other Edsel features include: larger glass area, with the windshield extending into the roofline, but not so pronounced as on the Mercury; Dial-Temp heater power controlled from a single knob; a Multi-luber, which automatically lubricates the chassis by a pushbutton on the dash; and safety features like the padded instrument panel, visors and windshield frame, seat belts, and a deep-center steering wheel.

(*See specifications on page* 30)

VILLAGER STATION WAGON

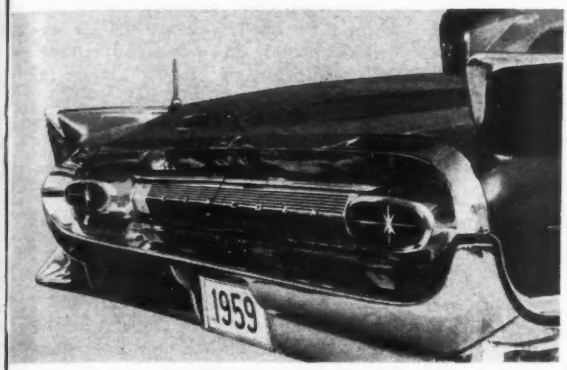


RANGER FOUR-DOOR SEDAN

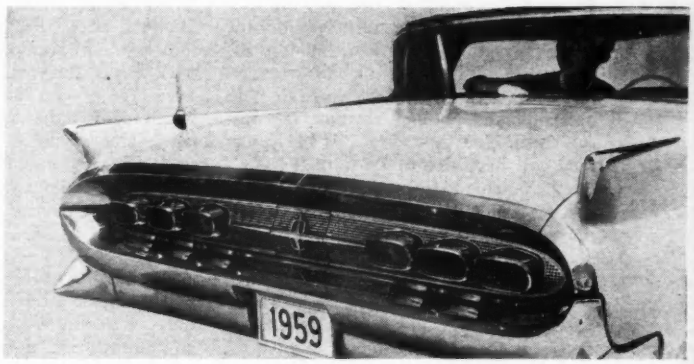
Mercury
Edsel
Lincoln

Features and figures for '59

	MERCURY	EDSEL	LINCOLN
BODY STYLES	Monterey: 2-D sed., hdtp., conv., 4-D sed., hdtp. Montclair: 2-D hdtp., 4-D sed., hdtp. Park Lane: 2-D hdtp., conv.; 4-D hdtp. Commuter: 2-D 6-pass. sta. wag., 4-D 6-pass. sta. wag., Voyager: 4-D 6-pass. sta. wag. Colony Park: 4-D 6- or 9-pass. sta. wag.	Ranger: 2-D sed., hdtp.; 4-D sed., hdtp. Corsair: 2-D hdtp. conv., 4-D sed., hdtp. Villager: 4-D 6-pass. sta. wag., 4-D 9-pass. sta. wag.	Capri: 2-D hdtp.; 4-D sed., hdtp. Premiere: 2-D, 4-D hdtp., 4-D sed. Continental: 2-D hdtp., conv.; 4-D hdtp., sed.
ENGINES	Cu. In. C.R. Carb. HP	Cu. In. C.R. Carb. HP	Cu. In. C.R. Carb. HP
6-cyl.	312 8.75 2-bbl. 235	223 8.4 2-bbl. 145	430 10.5 4-bbl. 375
V8	383 10 2-bbl. 280	292 8.8 2-bbl. 200	
	383 10 4-bbl. 322	332 8.9 2-bbl. 225	
	430 10 4-bbl. 343	361 9.6 4-bbl. 300	
TRANSMISSIONS			
Manual	3-speed (o.d. opt.)	3-speed (o.d. opt.)	Not offered
Automatic	Merc-O-Matic 2-speed Merc-O-Matic dual range 3-speed	Mile-O-Matic 2-speed Mile-O Matic dual range 3-speed	Turbo-Drive 3-speed
AXLE RATIOS			
Manual	3.56	3.56, 3.70 (sta. wag.)	Not offered
Automatic	2.71, 3.10 (opt.)	3.10, 2.91	2.87, 3.07 (opt.)
WHEELS	14-inch	14-inch	14-inch
BRAKES	205 sq. in.	167.5 sq. in.	262 sq. in.
SUSPENSION			
Front	Coil springs	Coil springs	Coil springs
Rear	Semi elliptic leaf	Semi elliptic leaf	Trailing arm, coil springs
STEERING			
Mechanical	Recirculating ball and rack	Recirculating ball	Not offered
Power	Recirculating ball and rack	Recirculating ball	Recirculating ball
INTERIORS	Front Rear	Front Rear	Front Rear
Headroom	34 33	34 33-34	35 34
Legroom	44 43	43 40	44 39-47
Hiproom	62 56-63	57 47-57	61 52-65
WEIGHT	4077-4704 lbs.	3834-4211 lbs.	4854-5115 lbs.
WHEELBASE	126-128 (sta. wag.)	120	131
TREAD	60 F 60 R (62 sta. wag.)	59 F 56.4 R	61 F 61 R
LENGTH	217.8-222.8	210	227
WIDTH	80.7	79.8	80
HEIGHT	56	56	56.5
CLEARANCE	6	6	6.1
POWER OPTIONS	Brakes, steering, seats, windows, air conditioning, multiluber	Brakes, steering, seats, windows, air conditioning, multiluber	Brakes, seats, windows, air conditioning, multiluber



LINCOLN rear bumper is molded to become part of body.



CONTINENTAL tail lights have exhaust stack treatment.

LINCOLN FOR '59...

...offers less noticeable sculpturing, minor mechanical refinements, options galore, and another Continental.

IN KEEPING WITH THE POLICY of building outstanding luxury cars with lasting designs, modifications to both Lincoln and Continental models for 1959 have been held at a minimum. The rear ends of both cars look very much like the front, even requiring a "grille" to finish them off. Continental distinguishes itself from the regular Lincoln by exhaust-like housings for stop, tail and back-up lights, and a new center ornament.

Probably the most noticeable change is the lessening of depth in the sculptured scallop in the forward quarter sheetmetal. The Lincoln grille now has narrow horizontal bars that accentuate the lowness and width of the car, while the Continental grille is made of block-type cells in keeping with European trends. Both cars have lighter-looking wrap-around bumpers, while the fender lines have not changed.

Mechanically, neither car has been changed beyond refinements in engines, running gear, and brakes (most of which have been made from time to time during the model run). They have been confined largely to new engine mounts and redesigned camshafts. Six new rubber mounts have been placed at contact points in the rear suspension to further isolate noises.

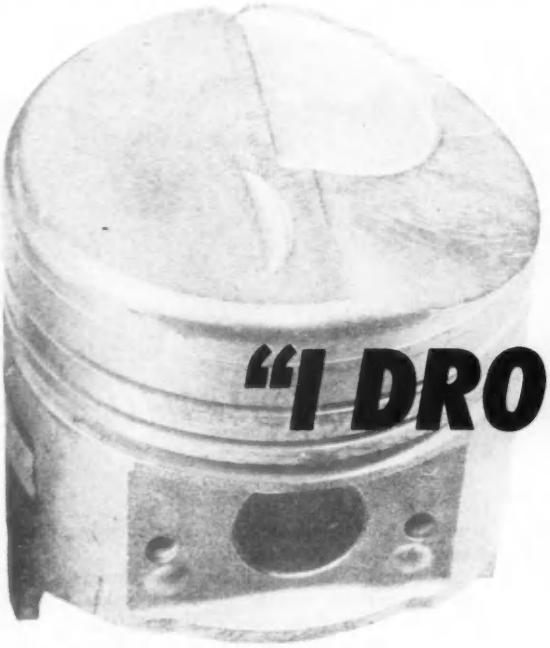
A host of optional accessories include these and more: single knob control of air conditioning, special FM radio, six-way power seats, pushbutton chassis lubrication, non-slip differentials, remote control deck lid, tinted glass, and all-leather trim.

CONTINENTAL'S egg-crate grille follows European trend.

SCULPTURED SCALLOP on Lincoln Premiere is shallower.

"I DROVE A STOCK CI

by D. M. Bartley



So don't play games with the next innocent-looking '59 Chevy you see . . . it may be the new Police Pursuit.

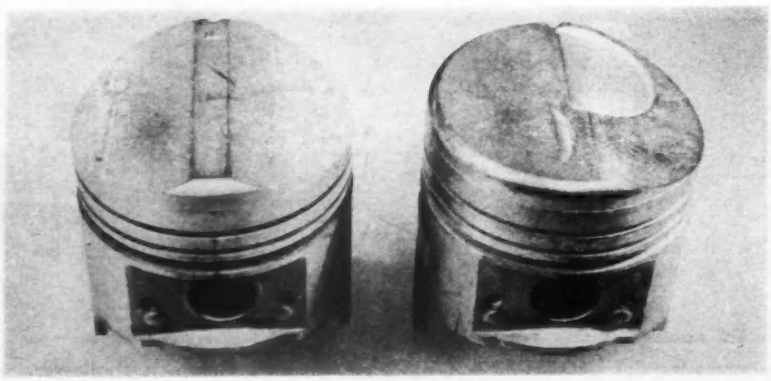
IF AT ANY TIME from now on, you find yourself in the unfortunate position of being pursued by a couple of highway patrolmen in a 1959 Chevrolet Biscayne, no matter what car you might be driving, do not panic and presume that you can outrun them. You can't. For it is likely that they will have one of the new, unpublicized, available-to-police Chevrolet options —a car which is precisely suitable for the purpose for which it was designed.

The day before the International sports-car race in Sebring, Fla., last spring, I had a brief ride in a prototype of this new Chevy police pursuit car which was then proposed as a production-car option. Its driver had offered me a ride back to town from the circuit but first had to make a stop at the airport offices located on the track. His errand completed, he headed the car in the proper direction on the circuit which required that we complete most of a lap before reaching the highway access road. Halfway around, he said casually, "This isn't quite an average Chevy. It's one that Zora Arkus-Duntov from Chevrolet Engineering loaned me this afternoon. Want to see?" I wanted to—and I did.

Coming out of the slow 90-degree bend with fabulous acceleration, we shot down the less-than-mile-long back straight to an indicated 65 mph in first gear, past 95 in second. The speedometer needle was creeping up on 120 before the car was braked smoothly down to take the horseshoe bend before the pits. No average car indeed!

Some months later in Detroit, I got in touch with Zora Arkus-Duntov—1946 Indianapolis entrant, 1955 Pikes Peak record-holder (Chevy), two times Le Mans Class F winner (1954 and '55 with a Porsche), Daytona Beach record-setter, designer of the famous Ardun head for a classic Ford conversion and of the fierce Allard racing/sportscars and currently a Chevrolet engineer best known for his definitive work on the now-hibernating SS Corvettes. The modified Chevrolet was his baby and, to my delight, he was willing to tell me about it and to demonstrate it.

The latter he did on the just-under-a-mile-long test track at the very beautiful General Motors Technical Center outside of Detroit. And the demonstration, though short, was a more highly skilled repetition of the Sebring run—again an indicated 65 mph in first gear, the acceleration very similar to my memory of that of a 4.5 Ferrari. The engine was not laboring a breath before Duntov made the shift into third at just under 100 mph. This time the



STOCK PENT-ROOF piston and police special model with valve overlap relief.

indicated speed was above 125 and the car was still accelerating when the sharply banked loop at the end of the track loomed what seemed to me perilously close. But Duntov knew well what he had wrought, so to speak, and the incredible sintered metal brakes again brought the speedometer needle in a sharp swing down to around a mile-a-minute in an incredibly brief time, braking the car evenly and without tendency toward lockup or pull as it entered the banking. Several full laps were taken, all at equal speeds. Later it was learned that as this was another prototype car, the speedometer was close to dead accurate.

For most of the following week, I used this car in normal city and perimeter-of-city driving. The handling could not be criticized. Only the slightly stiffened suspension—which felt just fine—and the fact that one had to remember to be extremely light-footed gave even small clues that this was not just an ordinary representative of the Biscayne breed.

This perfect-for-its-purpose automobile has modifications of engine, suspension and brakes and can be had with a three- or four-speed manual transmission, or with Powerglide. The regular 348-cubic-inch Chevy engine is used, its bore and stroke unaltered but with compression ratio upped from 9.5 to 11 to 1. Solid lifters, a special high-performance camshaft (not unlike the famous Duntov cam available for the Corvette), heavy-duty main and connecting-rod bearings, special high-compression pistons with clearance for valve overlap, and its own larger-capacity manifold are included.

Several carburetion choices are available within the option. The prototype car we drove has a single four-barrel, large-capacity carb which gives a slight power increase: 300 hp at 5600 rpm as compared with the more sedate family car's usual 250 hp at 4400 rpm. Three two-barrel carbs can be had, with which the same engine will produce 315 hp (this particular option having been available since early 1957). With either horsepower rating, maximum engine revs are up around the 6000-per-minute mark and engine idle speed is set at 500 rpm rather than the average 425-450 rpm. Maximum torque remains at 355 pounds-feet but occurs at 3600 rpm (without this option, the standard engine produces it at 2800 rpm).

Further changes included in the police option are the same sort of heavy-duty suspension as has been used for some time on police and export models, and those great sintered metal brakes—which are well worth getting excited about.

Released by Chevrolet last winter—still only for use on police cars—the sintered metal linings make these brakes virtually non-fade. *Any number* of panic stops can be made without any sign of fade at all. Using the brakes brutally over and over and over again from very high speeds eventually may produce some signs of wear, but you'll end up with a dragging brake because the return spring has suffered from heat before you'll get even a hint of brake fade.

Duntov mentioned that even though the brakes were power-assisted, I might find they had a somewhat different "feel" than I was used to. Actually the differences were so slight—no more than between two different makes of American cars—as to be barely noticeable. What was noticeable was the absolute reliability and effectiveness of braking in every way we could think to try. Detroit-car brakes can be criticized with justification, but these sintered metal linings make a tremendously impressive set of brakes. I asked why they weren't used for all Chevy passenger cars.

continued on page 81

CHEVROLET

135 MPH!"

wheel-to-wheel GP

Relates Mike Hawthorn of his '58 French Grand Prix victory: "I did not dream that I had any chance of winning; I thought the other drivers were just letting me keep Fangio occupied . . ."

by Mike Hawthorn
as told to Gordon Wilkins

THE MOST EXCITING GRAND PRIX EVER" . . . "Probably the finest Grand Prix ever run anywhere at any time" . . . The superlatives held in reserve for the really great occasion poured forth unchecked as press and radio reporters tried to convey what they had seen. It was a race which left spectators exhausted by tension and excitement prolonged almost beyond endurance. A young blond Britisher in only his second full season of motor racing had fought it out wheel-to-wheel with the veteran Juan Manuel Fangio, leaving even the reigning World Champion Alberto Ascari trailing astern for 30 laps of the 60-lap race. He had finally snatched victory by inches through a brilliantly timed maneuver on the last corner of the last lap. It was a historic event, but when the background is sketched in by Mike Hawthorn himself it becomes well-nigh incredible.

To begin with, the Ferrari team was not expecting to start in the race at all. The Grand Prix had been preceded by a 12-hour sportscar race running from midnight Saturday until midday Sunday; Ferrari had planned to win both events. He might have succeeded too, for the 4.5-liter sports Ferrari driven by Maglioli and Carini was leading by a comfortable margin after five hours of racing. Then it was disqualified for having its lights switched off too soon and being push-started after a pit stop. Rarely has there been such a bitter wrangle. The car continued running for some time while the dispute went on and officials made fruitless efforts to call it in. Eventually the race officials simply announced that the timekeepers would ignore the car from then on. That triggered off a hostile demonstration by the crowd, whose sympathies seem to have been on the side of the Ferrari. John Fitch had a very lucky escape when his Cunningham crashed at nearly 150 mph. Stirling Moss with Peter Whitehead went on to win in a C-type Jaguar, while the disqualification of Maglioli and Carini was reported to Enzo Ferrari at Modena. He was furious and word got around that his cars were being withdrawn from the Grand Prix in protest. Anxiously the team manager awaited his decision, and it was not until a short time before the Grand Prix that the drivers knew they were going to be allowed to start.

The lineup produced four Ferraris, driven by Ascari, Villoresi, Farina and Hawthorn against five Maseratis handled by three Argentine drivers, Fangio, Gonzales and Marimon, supported by Bonetto from Italy and de Graffenried of Switzerland. Ascari, who had done fastest practice lap of the 5.19-mile circuit in 2 minutes 41.2 seconds, was in the front row with Bonetto and Villoresi, both of whom had got around in under 2:42. Fangio and Gonzales were in the second line and Hawthorn, with a best lap of 2:43.5, had managed to make the third row with Farina and Marimon. Behind them were de Graffenried, Rosier (Ferrari), Bira (Connaught), Gerard and Wharton, (Coopers), Moss (Cooper-Alta), Bayol (Osca) and Macklin, Collins and Cabantous (H.W.M.s).

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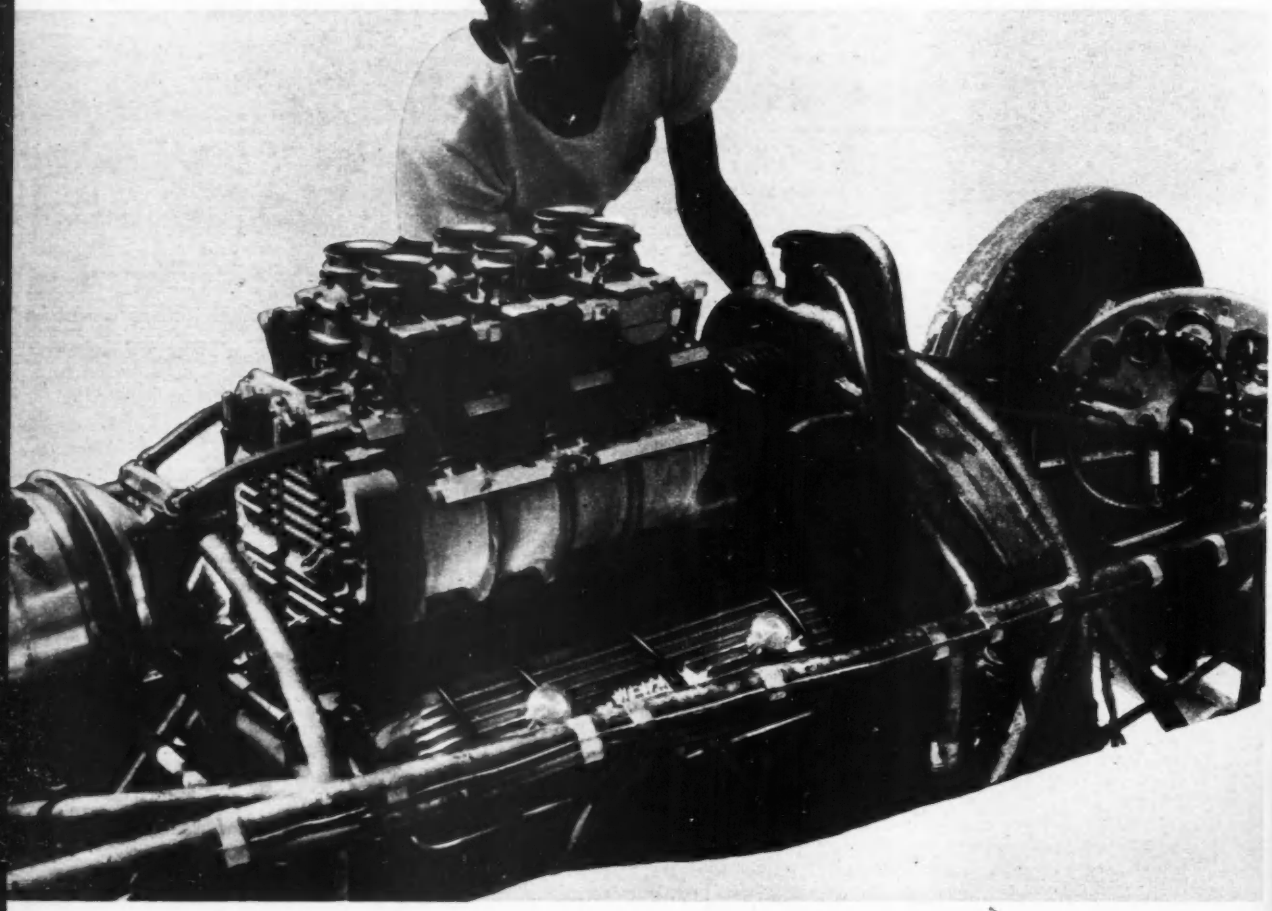
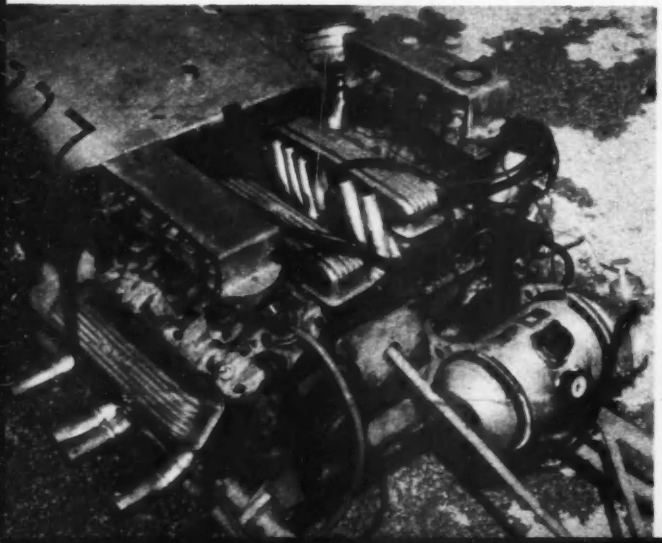
"Then I slipped into first, cut round the apex as close in as possible, straightened up the wheels and simultaneously slammed the throttle wide open."

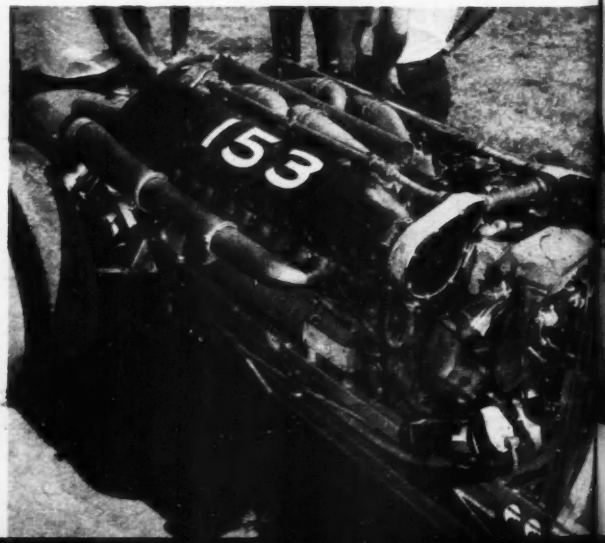
Illustrated by Carlo Demand

ENGINE-



TWIN CORVETTE engines, below left, and an Allison aircraft engine, below, are extreme samples of hot-rodding.





NUITY

CONCENTRATED EXPOSURE for a week at both the National Speed Trials on the salt flats at Bonneville and the National Championship Drag Races in Oklahoma City is barely enough to grasp the significance of what today's hot-rodders are doing. To these wizards in coveralls, the bizarre is commonplace; the revolutionary is the rule.

Even though one group is devoted to all-out top speed and the other to the best speed and elapsed time in the quarter-mile, the means of achieving their ends are surprisingly similar. A few cars operate in both leagues, the most notable being the Mickey Thompson-Fritz Voigt streamliner which turned an official Bonneville one-way record of 286.852 mph and regularly runs in the 150-mph class at the dragstrip.

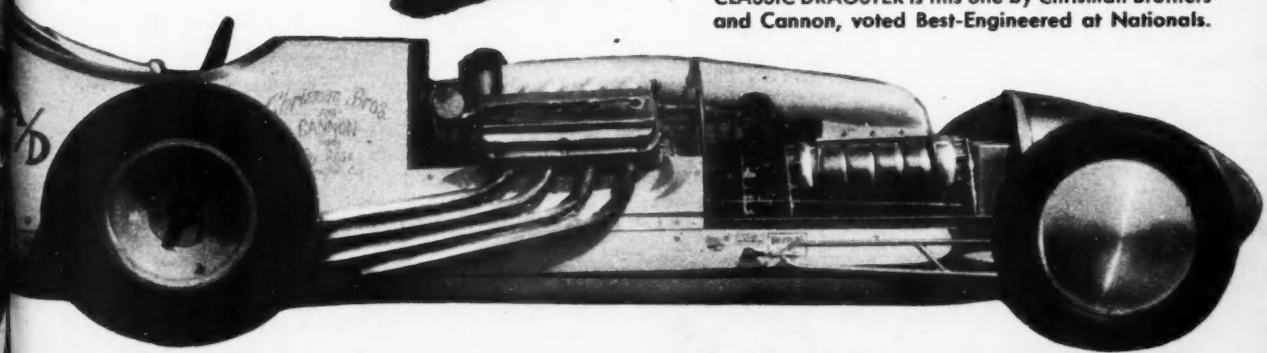
It is difficult to determine what is the most impressive among the many specialties which these speed engineers have developed, but several items stand out: The use of multiple engines mounted in seemingly impossible side-by-side positions or in tandem — up to three at a time; huge aircraft engines adapted for automotive power; the great debate in fuel systems — multiple carburetors or injection; the many theories in exhaust systems; finally, the most impressive, the extensive use of supercharging.

Each car builder has his own ideas of how to go fast. The amazing thing is that even though two theories may appear to contradict each other, both work equally well.

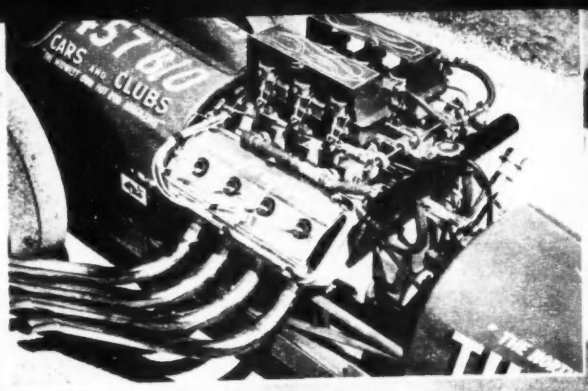
continued

Photos by Bob D'Olivo

FOUR-CYLINDER dragsters have become popular, run in special class. Elderly Ford B engines are revived for this.



CLASSIC DRAGSTER is this one by Chrisman Brothers and Cannon, voted Best-Engineered at Nationals.



Chevrolet ... tuned exhaust system with ... through ineffective curve in pipes.

LONG ... exhaust

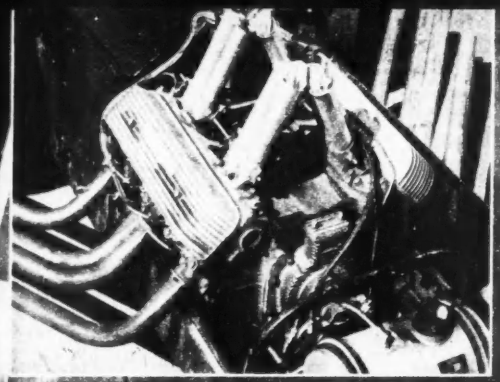
Volume ... begins

Hot-rodd... carbureti... tion with...

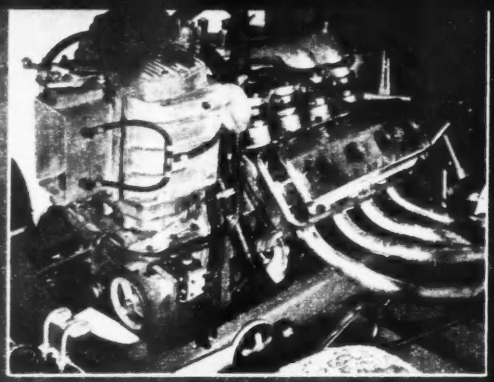
A supe... pensive ... plosive in... inefficien... atively ... there is ... better th... ventional...

A mo... tuning ... intake po... ment the... tubes an... timing a... power is... engineer...

GMC ... induct...



LONG INTAKE velocity tubes, smoothly shaped exhaust headers show top performance tuning.

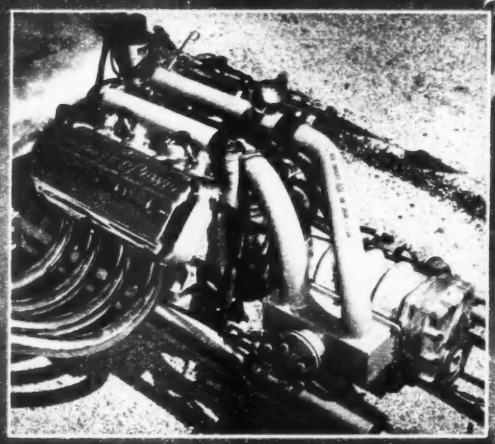


VERTICAL MOUNTING GMC blower on injected Dodge saves space, allows variable drive ratios.

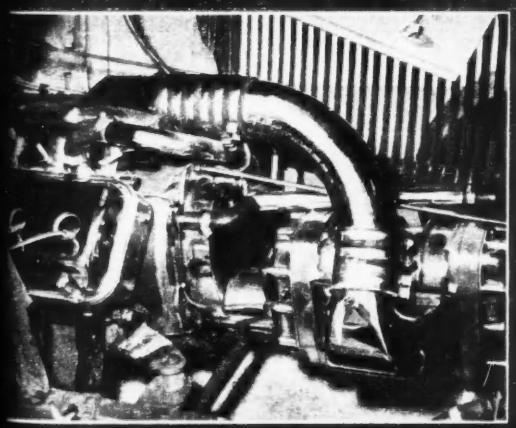
VOLUMES HAVE BEEN WRITTEN on the most efficient means of igniting an engine's fuel/air mixture. Hot-rodders use them all — superchargers, multiple carburetion, and tuned intake ram tubes in combination with tuned exhaust piping.

A supercharger is the easiest but the most expensive method of getting a healthy charge of explosive into the combustion chamber, but many are inefficient at low speeds. Fuel injection, again relatively expensive and complex, is much used but there is a large body of rodders who prefer the better throttle control at all speed ranges of conventional carburetors.

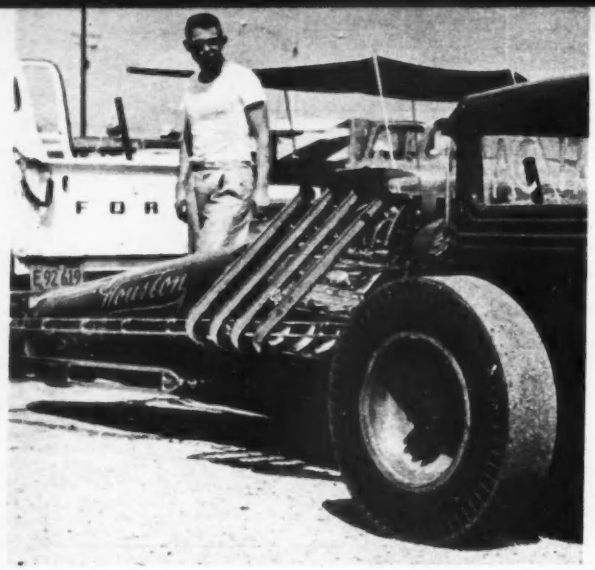
A most important factor is intake and exhaust tuning with ram tubes at the carburetors or on the intake ports, and exhaust pipes designed to complement the system. Finding the proper length for the tubes and pipes is an art interwoven with camshaft timing and just where in the rev range the most power is desired. Hot-rodding doesn't require an engineering degree — but it helps. continued



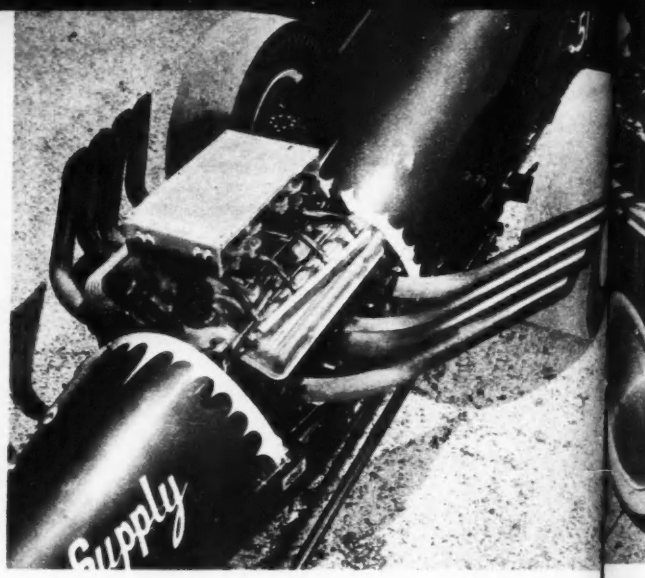
GMC SUPERCHARGER, nearly as long as engine, pushes huge volume of air into Chrysler mill.



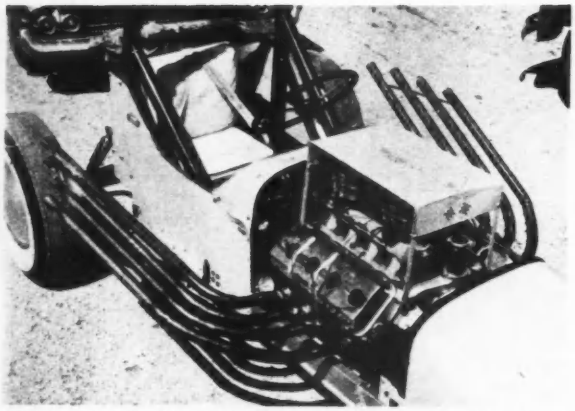
GMC BLOWER adds horses to DeSoto engine via induction pipe in 200-mph Bonneville roadster.



EXHAUST HEADERS assume many shapes and lengths. Diameter and length are important as related to air intake.



GENTLE CIRCLE is made by exhaust system on Lyndall White's dragster. Pipes get past tires, have minimum bend.



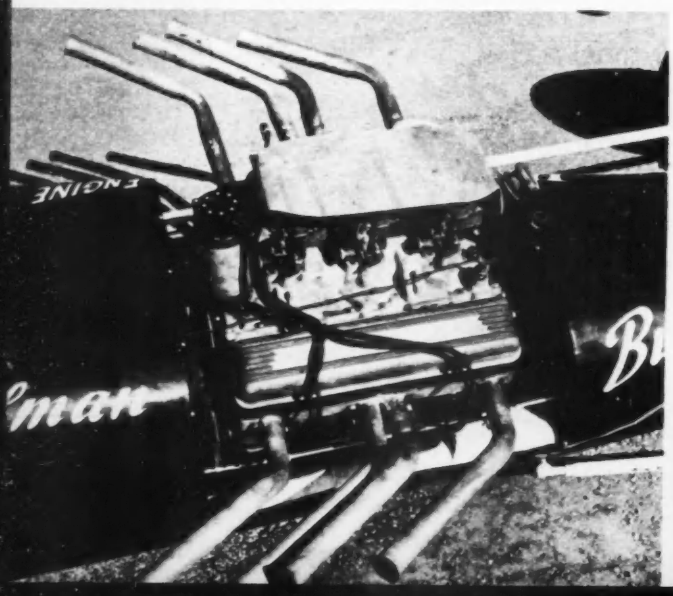
EXHAUST SYSTEM on Dodge-powered dragster is not as fancy as some, but chrome plate does nothing to add hp.

THIS MIGHT BE TITLED, "An Introduction to Exhaust Tuning." A properly tuned exhaust system, designed with the intake system, can add better than five per cent to the power output. And the only expense is a few lengths of exhaust tubing!

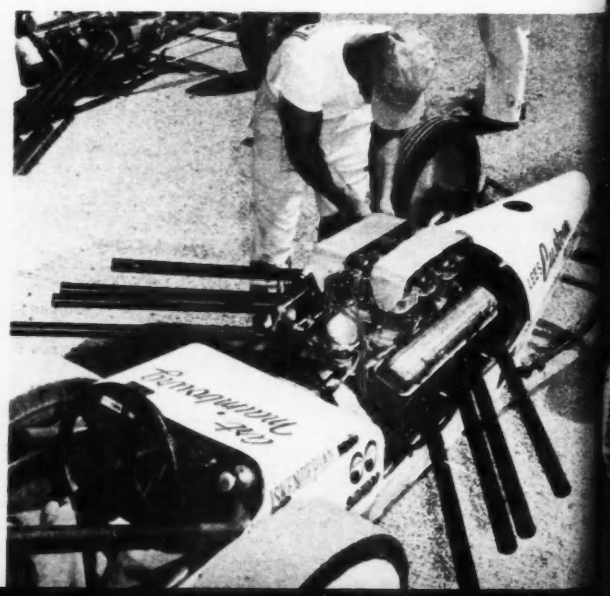
Shape and direction of tubing aren't terribly important. What is important is that tubing bends be smooth and acute angles be avoided. Some dragsters aim their pipes at the ground in front of the rear tires on the theory that this sweeps the course clear.

Tubing length is the critical factor. Briefly what happens is that through "dynamic extraction" you are boosting atmospheric pressure on the intake side of the engine due to the pulsating effect of the gas column — something like the pulsations in a wind instrument. If that sounds confusing, remember that for a given valve timing one length and diameter of exhaust pipe will give a certain horsepower. However, the slightest variation in exhaust pipe length may put the power all at one end with great losses in the middle ranges. Exhaust tuning takes patience and experimenting.

SHORTER HEADERS on carbureted Corvette engine have angle about as sharp as is desirable for best exhaust.



EXHAUST FLOW on this dragster has virtually no restriction via nearly-straight pipes from a Chevy engine.



DRAGSTER CHASSIS are as unique as some of their power-plants. Thin frame rails and three-leaf springs are typical.

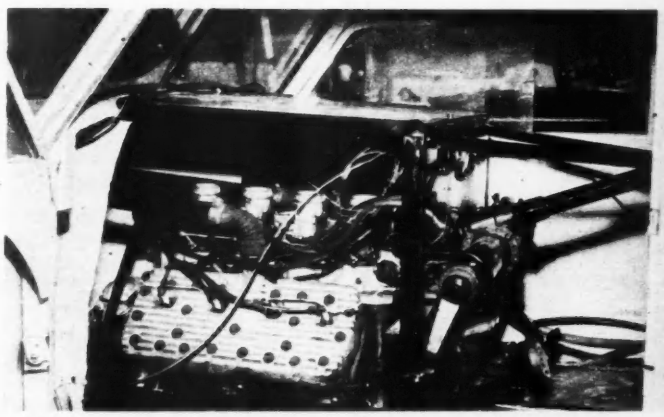
1927 FORD ROADSTER has been scaled down, reproduced in Fiberglas with Crosley engine. Car is used on street.

CARS WHICH APPEAR out-of-this-world to the non-hot-rodder are not really peculiar when the reasoning behind them is understood. Getting the most performance out of any given engine or going fastest within a racing class is the common goal of hot-rodders. Standardization of design is not important. Hence, the great variations in types, sizes and styles of automobiles.

Builders of dragsters, for example, place engines well back in the chassis and add wide slick drive tires — all for maximum adhesion in getting off the line. Other rodders go in for the unusual in body shapes and pride themselves on building a machine suitable for competition or limited street use. Capturing the public imagination currently is the use of multiple engines — two or three in a row — in fast dragsters and in streamliners with 300-mph potential.

About the only thing certain in hot-rodding is the certainty of change and progress in the sport. No matter how fast anyone is prepared to go, there is always someone ready to go faster.

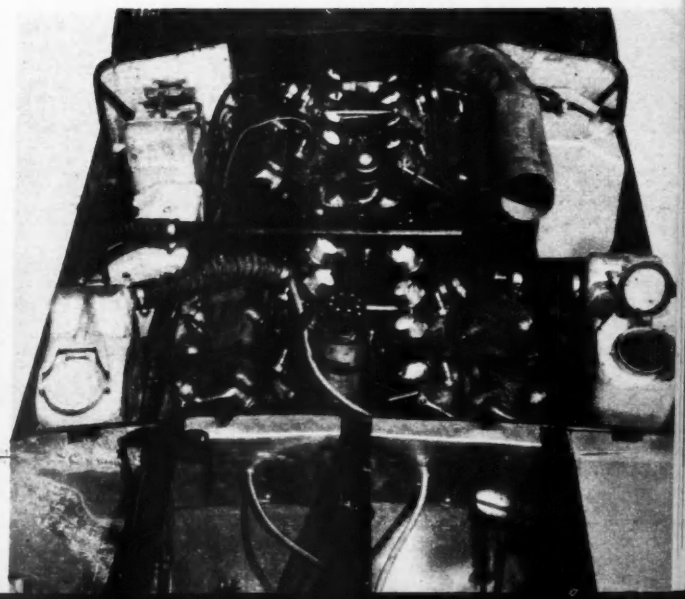
— Wayne Thoms



DRIVER used to sit in Crosley body where Ford engine now rests. Wheel and controls are now centered well back.

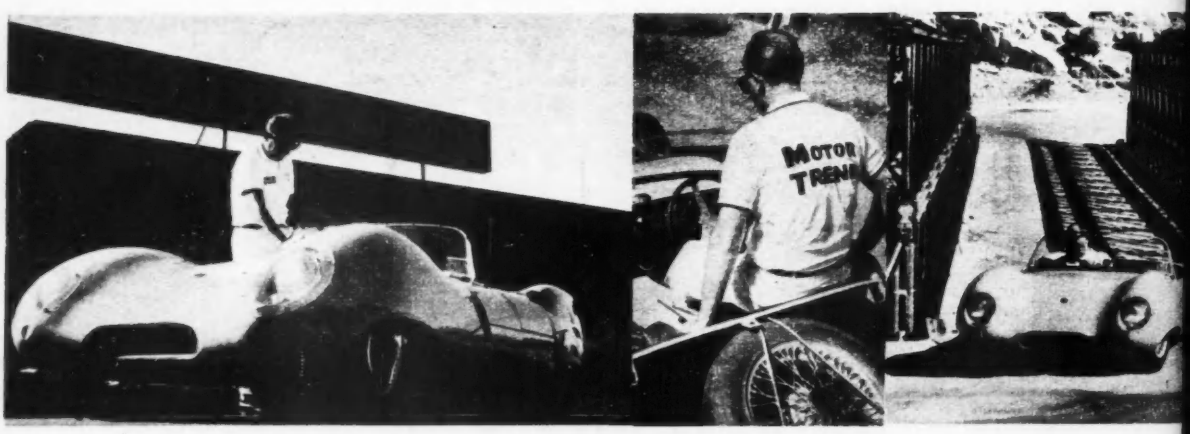
THREE CORVETTE ENGINES rest low in chassis of Chet Herbert's streamliner. The driver semi-reclines at the rear.

TWIN CHRYSLERS power Mickey Thompson's streamliner on the salt and dragstrip. Jeep cans hold engine water.



The

driving around with WALT WORON



LOW FRONTAL AREA is typical of all Lotus models. Seating is tight fit; lightweight seats wedge driver into firm, comfortable position so that no safety belt is needed during hard cornering.

PHOTOS BY CHARLES NERPEL

LOTUS CLUB performed best on open highway, climbed mountain roads with ease, giving 25-mpg economy on trip.

COVENTRY CLIMAX engine displaces 1100cc, has single overhead cam, develops 75 hp at 6250 rpm in this model.

LOTUS CLUB
slight screamer

DESPITE THE FACT that Lotus "sportscars" have been around on road racing circuits for several years now, few people have seen them close up. Fewer still know anything more about them than that "They're some kind of a special, aren't they?" Even in an area as automotive-conscious as Southern California I was amazed at the questions asked, like:

"What kind of a car is it?"

"Did you build that?"

"What kind of a body is it?"

"What kind of an engine does it have?"

"What country is that built in?"

Of course the people you meet on the street are not the same ones who necessarily attend road races—aficionados who know that the Lotus is a car that has carved a niche for itself in competition. In the hands of the builder, Colin Chapman, it began to appear on road race circuits in 1953. Through its growing pains, using different engines, including a two-liter Bristol, it racked up several wins, including 11th place overall at Sebring, 1957, then fourth, sixth and ninth overall at Sebring, 1958.

New versions of the Lotus are still appearing because of two reasons: Colin Chapman strives to constantly improve the breed, and no one car is run long enough without change. That this is the policy of the Lotus Engineering Co. (London, England) is evident in its brochures, which state, "In accordance with the company's progressive policy, the right to alter specifications without notice is reserved."

My main interest in the Lotus Club was to determine if you can take a sports-racing machine like the Lotus Eleven and, without basic alterations, make it into a street machine. The Le Mans model is the original sports-racing machine, having seating capacity for only one, a built-in headrest-fin, and other minor changes that are more suited for all-out racing, including a windshield screen that wraps completely around the driver.

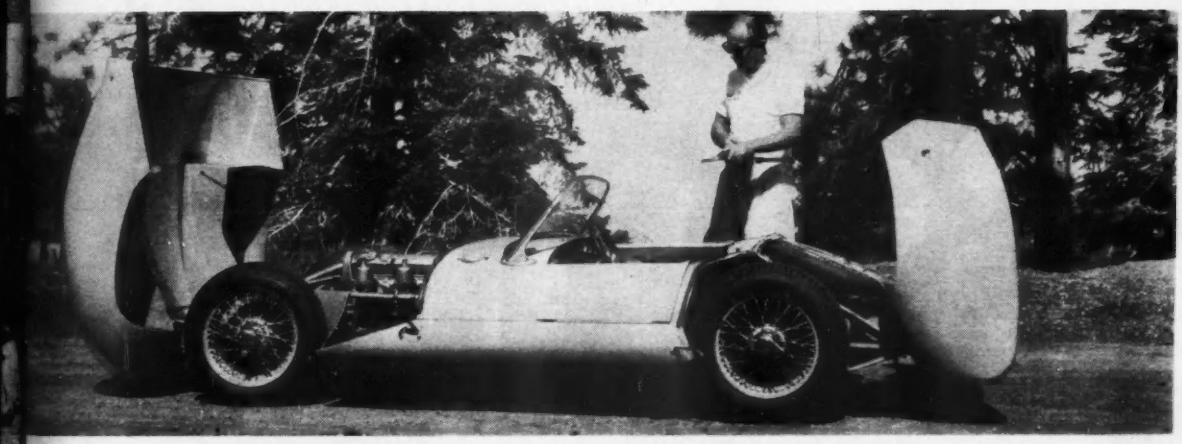
The basic differences between the Le Mans and Club models are these: The Club model has a live rear axle from a Nash Metropolitan, located by parallel trailing arms, with a diagonal member to provide lateral location; the Le Mans model has a de Dion rear suspension (The live axle on the Club model can be replaced by a de Dion system at extra cost.) The Club has hydraulically operated, two-leading shoe drum brakes: the Le Mans has disc brakes, outboard at front, inboard at rear. Both models have rack-and-pinion steering, though on the Le Mans model it is lighter. Gearboxes are different only insofar as ratios are concerned, the Le Mans having closer ratios. Both weigh about 850 pounds.

The exceptional road qualities inherent in the Lotus Eleven Le Mans have been carried forward into the Club. These are mainly due to the lightweight tubular frame, a sheet metal driveshaft tunnel that acts as a structural member to carry the floor and the rear engine mounts. The engine is tilted 10 degrees sideways so as to reduce frontal area. Front suspension is by swing axles, incorporating combined coil spring-shock units. The roll center is very low and greatly aids in its handling. The basic difference in handling between the Le Mans model and the Club is due to the latter's live rear axle. On rough roads the Club has a tendency to wander, or walk from side to side, taking real concentration to keep it in a straight line. The de Dion rear axle would more ably swallow up these changes in road contour.

Nevertheless, the handling of the Club model is quite wonderful. It has very quick steering, has marvelous response and, of course, would be easy to overcorrect if you're not familiar with such a car. Taking it around a turn, no matter how many degrees there are, you never have to take your hands off the leather-wrapped wheel for there are only 1½ turns lock-to-lock.

The engine used in both Lotuses is virtually the same—the 1100cc Coventry Climax four. This is an aluminum block engine with steel liners, an overhead cam driven by chain from the crank. The crankshaft is fully counterweighted, uses five bearings, and has split connecting rods to enable their easy removal. The pistons are aluminum, combustion chambers are wedge-shaped, and the compression ratio is 9.8 to 1. Power output is 75 bhp at 6250 rpm or 83 at 6800 rpm, depending on the state of tune.

To get back to the question at hand, is it a street machine—or at least one that you *could* drive back and forth to work? Or is it best for a competition driver who wants to move up in class, and happens to have $4709 in loose change? Let me recount some of my experiences with it after leaving Jay Chamberlain's place in North Hollywood (the U.S. distributor) until I returned it a week later. Then you can decide for yourself.



ALL LOTUS COMPONENTS are quickly accessible when four spring hooks are unsnapped, hood and rear section are swung up. Both easily removed from car.

When you first stand alongside this three-foot-high (at the windshield) machine that fits into your 20-foot garage with more than four feet to spare at either end, you get the impression of fragility. Never forget it! You'll find that the aluminum body is virtually paper-thin. If you lean too heavily on the body when you're washing it, you're liable to leave a dent. You have to make sure you're not parked alongside someone who opens his door suddenly, putting a nice crease in your side. You want to park it where curious onlookers won't paw all over it and give you handprints—handprints that are outlined by the shape of the metal itself.

You can get into the car in one of two ways. I found it was much easier to step directly over the side (which is only 24 inches high) than to open the flap-down door—which makes it a shorter height to step over but increases the spread. If you have dirty shoes and clean clothes, the best

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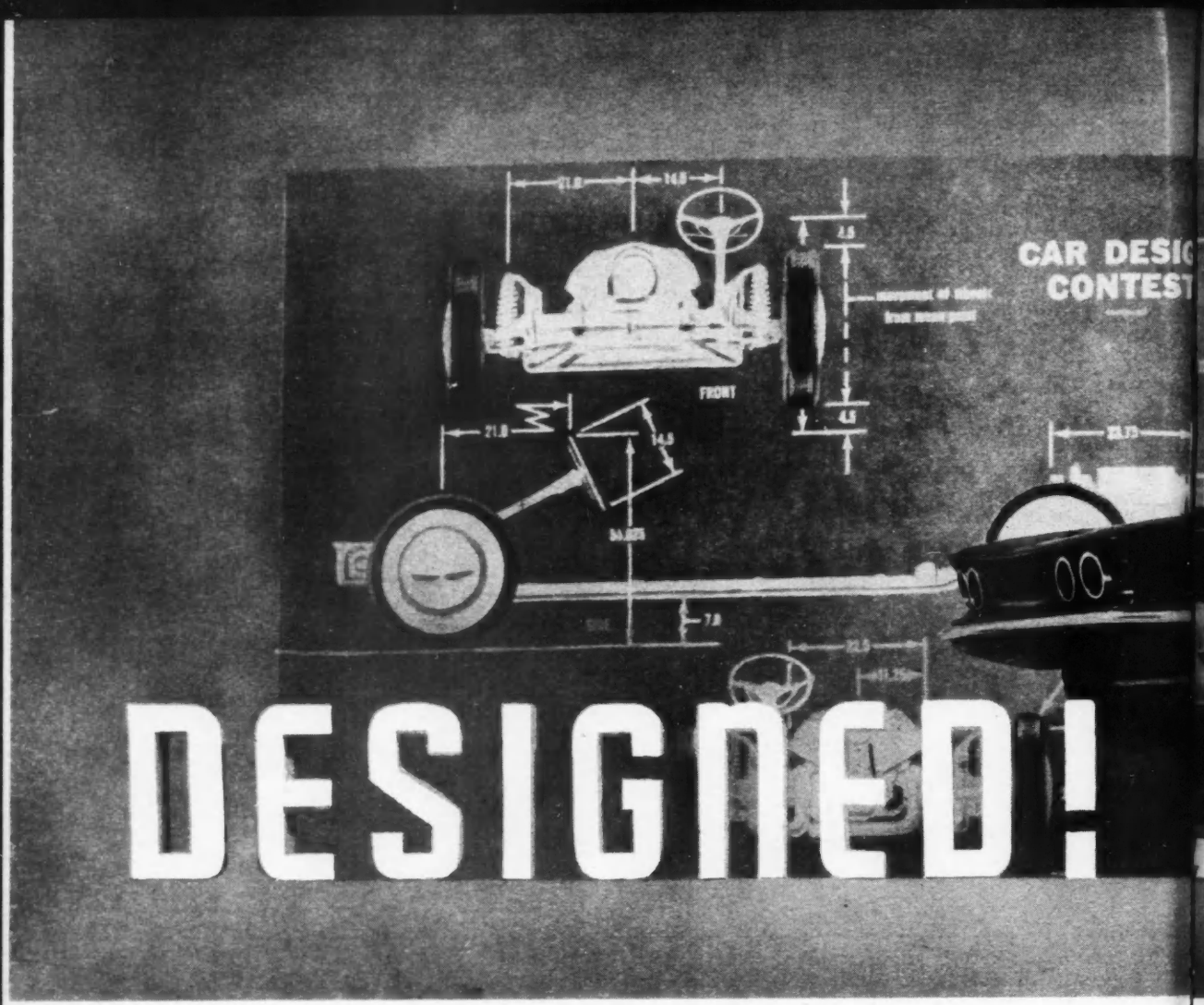
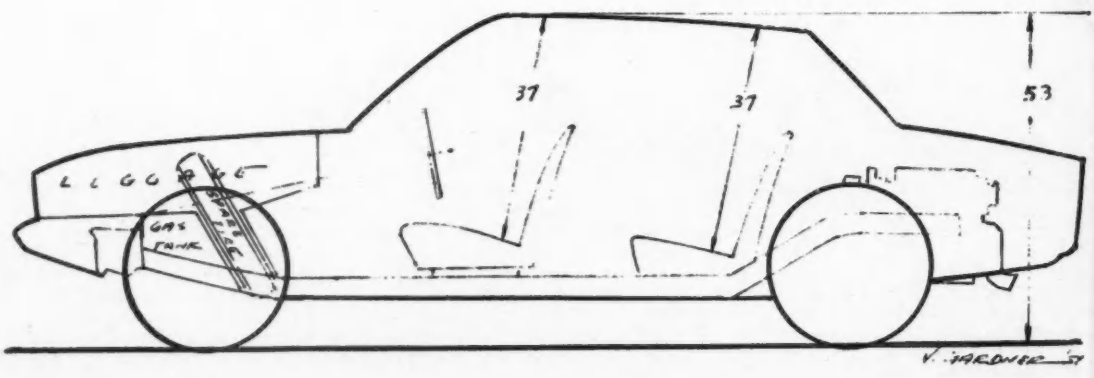
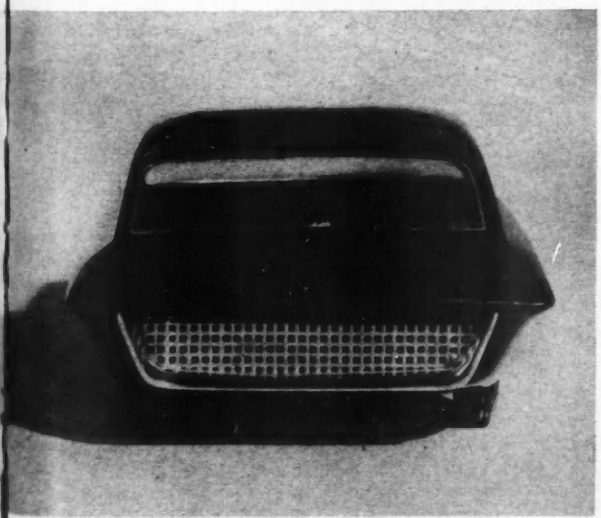




VINCE GARDNER'S winning sedan in diagram form. Seating comfort, provisions for spare, gas tank, luggage room, and overall producibility were decisive factors.

A SMALL CAR



SEDAN MODEL, rear view, has distinctive grille treatment. In final construction, lights and bumpers are added.

MOTOR TREND'S CAR DESIGN CONTEST (announced in March, 1958) garnered boxes and boxes of entries, all of which received most careful scrutiny before the winner was finally selected. Now, with plans going full steam ahead for the awarding of treasured prizes, the winner's name is announced.

First place goes to Vince Gardner of Detroit, Mich. Gardner, who told MOTOR TREND that he was working almost full time on the Fall Auto Show in Detroit, found time to draw up the most appealing—and producible—plans to be submitted in the contest. His winning entries were created on off-hours in his own shop.

In the opinion of the contest judges, Gardner's approach to the basic problem, i.e., designing two practical, usable, and functional body styles for use on the small rear-engine car chassis built by the Frank Thomas Development Corp., most closely tallied with expectations. For example, in the utilization of the "horizontal crease," Gardner displayed the type of thinking that the judges were seeking. The sedan on these pages, according to the letter accompanying his submittals, presented a greater creative challenge than the sportscar (on following page).

More than 500 eligible entries were received from all over the country. One contestant, who submitted his entry prior to leaving for the Orient, sent in a duplicate set of drawings from China—just in case the first group might have been lost in the mail.

continued

DESIGNED! A SMALL CAR

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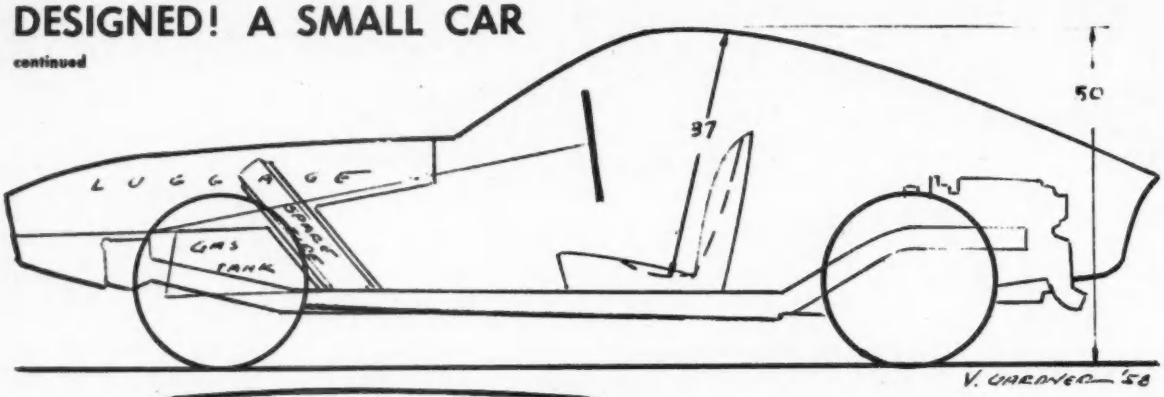
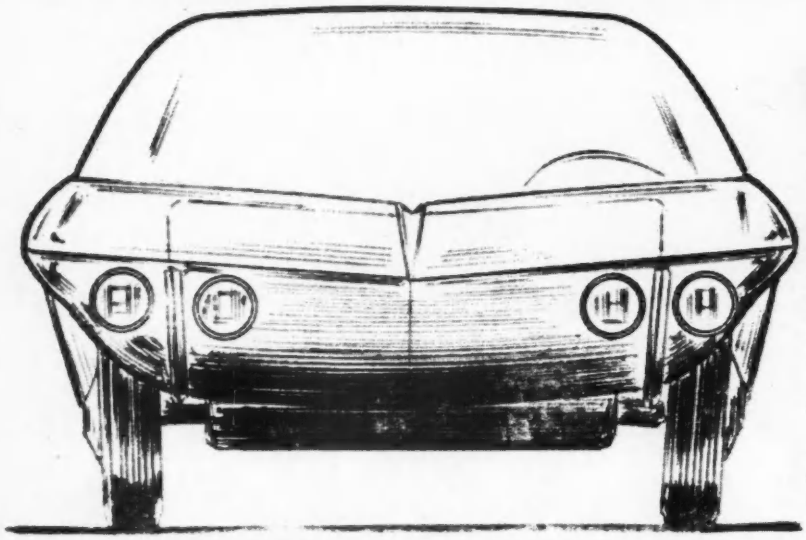
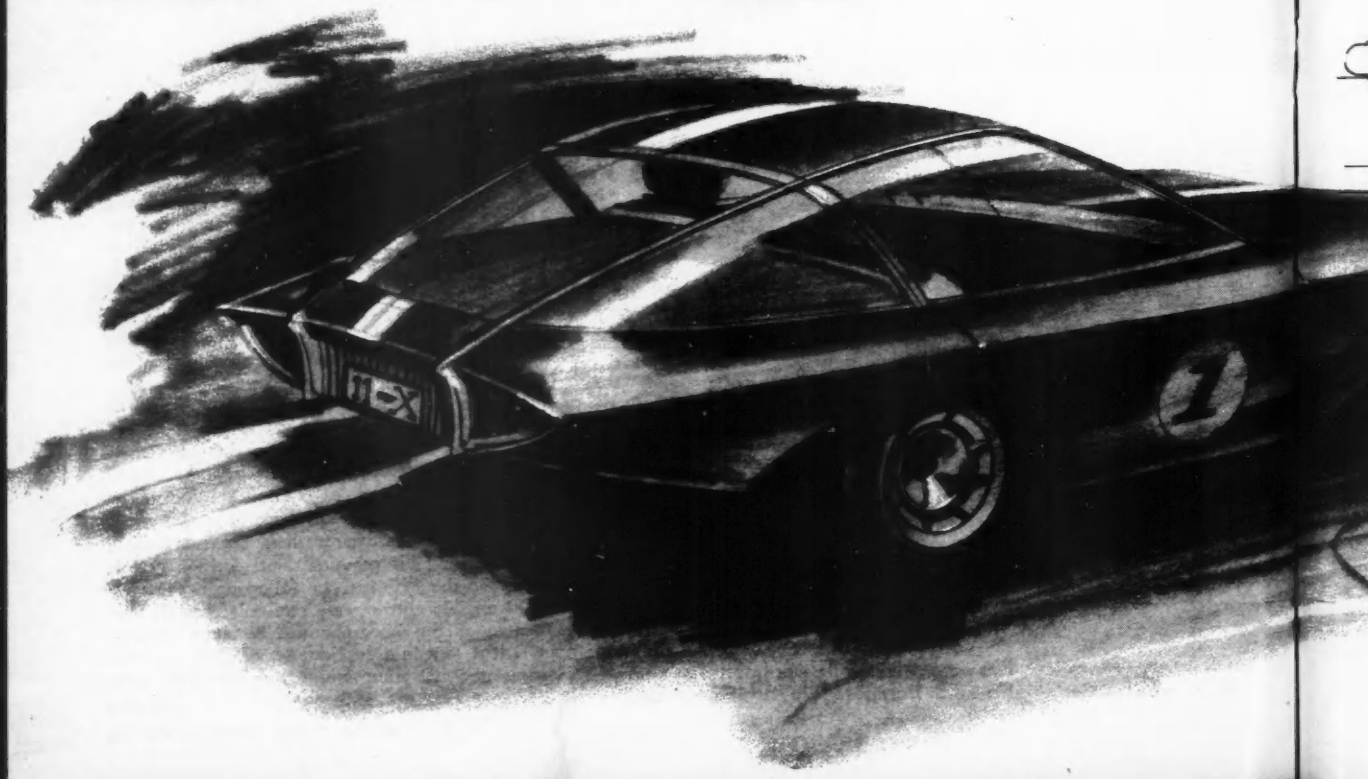
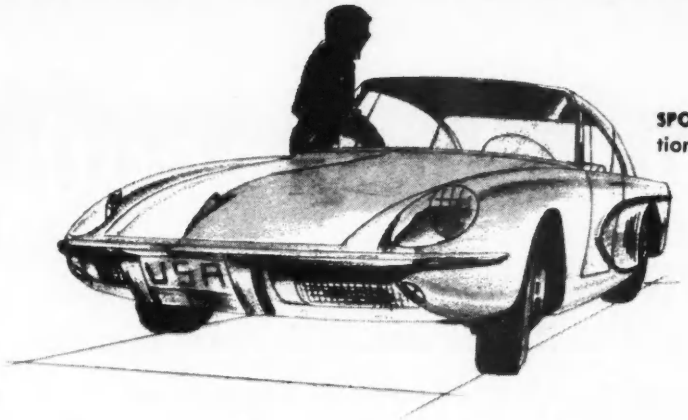




1st Winner Gardner's entry of the sports model reflects the public thinking that faces domestic design engineers. A very slight curve, reminiscent of some European models and recent Chrysler models, accentuates the windshield of the fixed-head coupe, illustrated on this page. Contestant Gardner has applied a tonal line in the form of a horizontal crease to give, he explains, length to the car as well as adding simplicity toward fabrication and rigidity to the panels. With a "lifted skirt" appearance fore and aft, both his coupe and sedan are built to maintain the clarity of vision which is a strong safety factor in today's smaller cars.

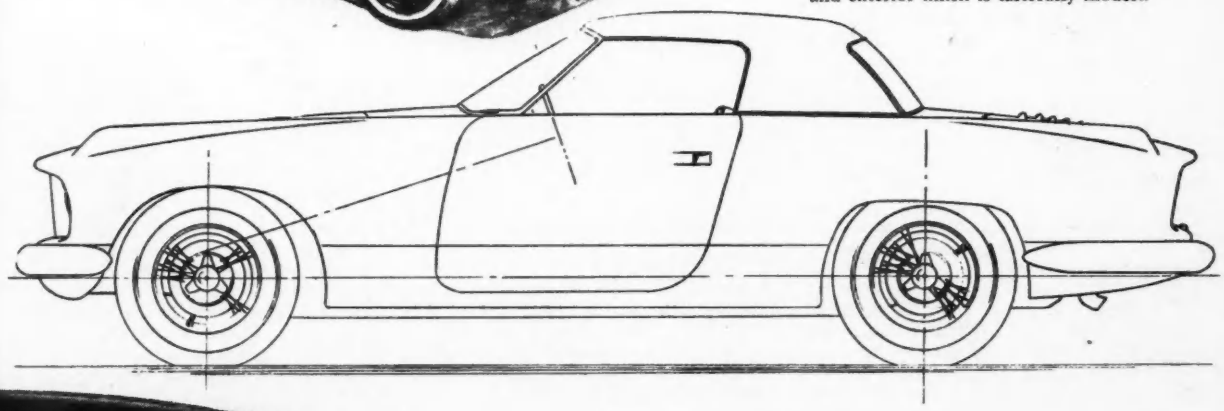
His own description of the style: "Plain aerodynamic forms are beautiful, but I tried a modern touch on this one. I'd call it 'aero-MODERN'—if such a thing exists."

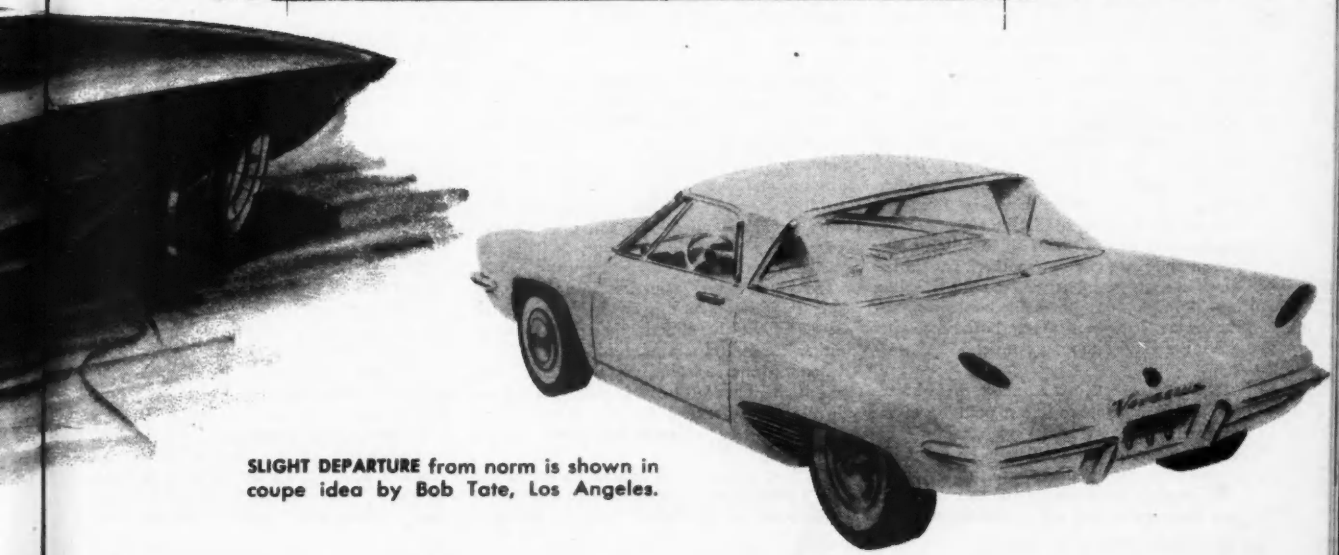




SPORTS COUPE, left, won honorable mention for Ray Bossung, Los Angeles.

2nd Second place winner is Gordon Collins, of Sellersburg, Ind. The Collins cars, both the sedan and sports models, feature identical contours below the belt line and use identical hood and trunk lids. Seat frames, cushions, and their mountings and all lower body structure and instrument housings are identical. The two models are shown at the left and below, as submitted for judging. Despite construction similarities the general styling theme is pleasing but not radical. Many items of trim and small fittings are current standard production items, and the general interior and exterior finish is tastefully modest.





SLIGHT DEPARTURE from norm is shown in coupe idea by Bob Tate, Los Angeles.

"It's What's Underneath

Safety and comfort—like beauty—are more than skin deep. Beneath the chrome and fins it's the unsung heroes—brakes, springs, shocks and steering—that are really important.

SQUEAKY BRAKES DO A LOT MORE than make noise, a thought brought home as my brother-in-law ground to an ear-shattering halt in the driveway.

"What's wrong with the brakes, Bill?" he asked me. "They've been squealing like pigs. Your sister threatened to make me sleep with the dog—unless I came over and had you look at them."

"Pull a wheel, Bob," I replied, "then we'll have a legitimate idea of what bothers your ears. Get the jack while I pull the left front hubcap and loosen some wheel nuts."

Soon the brake drum was off and we were using the wheel and tire as a seat to consider the linings. "See, Bob, this lining is smooth as glass and burnt a dark gray-brown. What probably happened is this: During a trip to the mountains you rode the brakes down a long hill. They got hot, stayed that way, eventually cooked a little resin from the lining, and spread it all over the friction surface."

Bob leaned over his exposed brake plate and eyeballed the rig for a minute before pinning me to the ground with my own words. "Great. Now what do I do?"

I took a closer look at the lining, which although discolored showed only surface glaze. "When you have time, Bob, stop at a good brake shop and have all the linings reground to fit the drums," I told him. "Most shops have something called a 'brake doctor' which hangs on the axle shaft and uses a small motor and grinding wheel for truing brake linings to exactly match the drum. This, incidentally, is something you should do the next time you buy a new car."

"You mean that new car brakes don't fit the drum?" Bob needles.

"Not quite. They fit well enough when installed at the factory, but heat from the first hundred or so applications changes the shape of drum and shoes so the lining may rub in one place and not another. This makes for hot spots and burned linings. Grinding new lining to fit is one of the best things any car owner can spend a few bucks for, after driving a couple thousand miles."

"CAN I DO ANYTHING to make these brakes better?" Bob wants to know, pointing to the exposed shoes. "When I go camping next year, my new trailer's going to be a handful down those mountain grades."

"There's a lot of things you can do. Check the local dealer and ask if the factory offers Export, Taxi or Police brakes as options on their cars. You may be able to fit these super-duty binders, with their increased lining area, on this same sedan. Or you might have the shoes relined with special multi-stop lining made by most brake companies for light truck use."

"How does the multi-stop lining differ from regular lining, Bill?"

"Biggest difference is in the binder. Most passenger car lining is baked into a brake strip with resins holding the fabrics together. This produces a surface with plenty of friction so you don't have to pedal very hard to make a decent stop. On the other hand, multi-stop lining uses metallic or ceramic-metallic binders that produce a hard lining not so likely to scorch when hot. But you have to brake a lot harder to get the same stopping rate you'd get with standard lining. Check your local brake shop on this, as most car dealers stock only factory supplied lining materials."

While listening (I hoped he was), Bob was poking around the front end. "Hey, Bill, look here."

I leaned over and took a look. He was fumbling with a shock which had a light oily film on the outside.

"What's wrong? Are my shocks shot?"

"No, they are okay," I tell him. "Most shocks are designed to breathe a little oil mist and should not be replaced because of it."

"SPEAKING OF SHOCKS, what can I do to make the crate ride better?" Bob asks.

"Quite a bit, if you keep in mind that car rides are a compromise between the boulevard pillow we like for comfort in city driving and some degree of firmness for stability and control at highway speeds. You can't have both, Bob. But you can improve your car."

"How is that?"

So I tell him. "The first thing is to be sure both front springs are holding the car at equal height. Check the rears too. If either set is unbalanced, and the car leans when no one is inside, replace them. Then check the fiber or treated paper pads (not in all cars) between the rear leaves. Tired pads should be replaced. And don't ever oil the things!"

Bob stopped poking around under the car for a minute, turned around with a quizzical expression on his face. "Are you kidding? I thought all springs had to be lubricated."

"They were—a long time ago. Modern cars have suspension systems designed around leaf or coil springs of exact flexing rates. Friction pads between the leaves are to control amount of spring bending. If you oil the pads, springs bend too much and too rapidly. If the pads are worn out, the springs can't bend enough, which gets back to what I hinted a moment ago. Put back the pads installed at the factory and your car will ride like it did when new. But there are exceptions to this factory replacement rule."

Bob's eyebrows lift. "There are?"

"Right. Two to be exact," I say. "Biggest improvement in ride quality comes from installation of late-model shock absorbers. New shocks usually have multiple valving, which gives a soft ride around town. As wheels begin to hammer at highway speeds, the shocks stiffen to provide a real measure of stability and control. Another improvement found in modern shocks is use of oil that doesn't thicken much in cold weather or thin out rapidly during hot days. They'll give a good ride all year around. For that trailer you mentioned a minute ago, a pair of support shocks which have a heavy spring around them will help the car carry moderate overloading. Maximum support is provided by a set of rubber air bags for car springs, which can be quickly set for almost any degree of stiffness."

"What's the other improvement, Bill?"

"A real oddball. You see lots of late-model cars have gone to using rubber bushed shackles and suspension members. At high speed, the rubber bushings allow springs and suspension frames to move in and out of alignment just enough to make the car feel a bit mushy. If you want to spend the money, and can find threaded bushings to fit your car, they're a good investment for improved stability at speed."

"WHAT ELSE CAN I DO to make my car safer?"

"Without completely rebuilding the car, all you can do is make minor improvements. For example: Set up the suspension system with heavy-duty shocks. They'll give you a firm ride and plenty of suspension control at highway speed. Make sure the spring actions are equal as I mentioned a few minutes ago, and that all the shackles are in good shape. Finally get a good set of tires. Instead of buying the fanciest low-pressure doughnuts on the market, spend a few extra bucks

That Counts"

by William Carroll

Illustration by Dick Fischer

for firm, heavy-duty rubber. A recent test comparison showed that if a conventional four-ply tire was good for a life rating of 100, a belted tire with radial carcass and wire breaker was good for a rating of 185, or almost double life. The stiffer tire, running at higher pressures, will give handsful of control like you've never had before."

"Sounds good, Bill. Can I do anything with steering?" Bob inquires.

"Darn little. Steering geometry is such a complex collection of engineering compromises that even the tiniest alteration to steering linkage throws the whole mess skyward. But you can always scrounge around local junk yards for a smaller steering wheel to fit your rig, or check factory catalogs for a longer pitman arm. Both increase the effort of steering but reduce the amount of wheel twist to create action in front."

Bob wanted to know what the pitman arm looked like. I pointed it out and turned the steering wheel so he could watch the action. As I did this, there was a light "pop!" each time the wheel was turned from side to side. It didn't sound good, so Bob turned the wheel while I checked the links. Sure enough, one of the tie rod ends was as loose as a Christmas goose. If it hadn't been for the cotter key, Bob might soon have found himself driving in two directions at once.

"Look here a minute, Bob," I tell him. "See this loose connection? Had the cotter key been missing, this nut would have fallen off and put you completely out of business."

BOB'S FACE LOST COLOR like a hairdresser's mistake. He gulped and without a word went into the garage for my socket set. It didn't take long to tighten the nut and put in a new cotter, while I told him what recently happened in New Jersey. Frederick J. Gassert, Director of the Motor Vehicle Department, wanted to find out how many automobile accidents were caused by failure of nuts and bolts to stay on the car. His survey showed conclusively that 1262 recent accidents in New Jersey had been caused by something falling off the car. There were 50 brake failures, 94 wheel accidents, 166 loss of steering control accidents, plus an assortment of driveshafts, transmissions and engines bouncing off the pavement because attachments had loosened.

Bob was mighty quiet while I replaced the drum and wheel we'd removed to check the brakes. He said thanks and drove off. About a half hour later my phone rang. "What did you do to Bob?" my sister wants to know. "He came home a few minutes ago, climbed under the car and is tightening everything he can reach. He mumbled something about, 'It's what's underneath that counts.' And he says he won't come out until he's finished, even if dinner *is* ready."

She cooled off while I explained some of the things Bob and I talked about, and finally agreed that tightening their car was a good idea. On that pleasant note we hung up. Then I went back outside. Seems I had to finish with a few loose nuts on my car—which I found after Bob left!

BRITISH

CRAFTSMANSHIP

AND DISTINCTION . . .

Room for all the family and all the luggage, too! The British knack for practicality never showed better than in this trim craft. Despite its compact design, the Vauxhall provides ample room for five—plus vacation-size luggage space. It combines power for all-day cruising at highway speeds with fuel economy remarkable even by austere British standards. And to further make it your best import buy, you get wrap-around windshield, American type gearshift, full instrumentation and heater as standard equipment. The Vauxhall is well worth your inspection—and bring the whole family.

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For co'our catalogue, write Pontiac Motor Division, Dept. 24, Pontiac, Mich.

AROUND THE WORLD IN 30 DAYS

A monthly summary of the latest foreign car news from our overseas correspondents

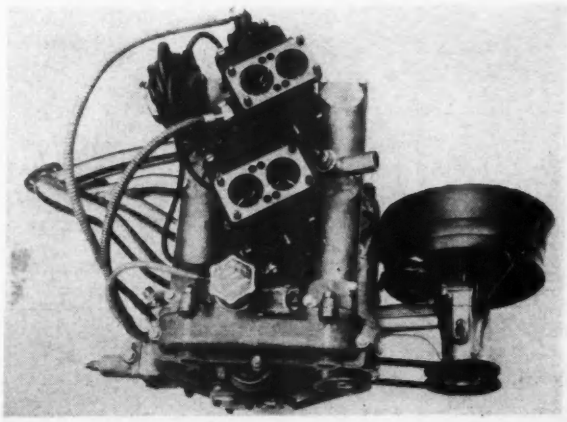
ITALY One of the most exciting small packages in years is Abarth's new 750cc Gran Turismo coupe, shown at right with engine. Body shell is similar to a previous Abarth-Fiat (MOTOR TREND, July '58) but this is a brand-new powerplant. Twin-overhead camshafts are chain-driven and there are two Weber dual-throat carburetors. Bore and stroke of the four-cylinder engine is 2.37 by 2.50 inches, and with 9.7 to 1 compression, horsepower is 57 at 6300 rpm. The compact coupe weighs 1190 pounds and speeds in excess of 110 mph are anticipated . . . Lancias will soon be available in quantity in the U.S. A few have been imported since the war but now the Hoffman Motor Car Co. will distribute the full line—six models ranging in price from approximately $3298 to $7468 . . . A unique Formula I car for next season is currently being designed in Modena. Ing. Collotti, former Maserati chassis expert, is planning the rear-engined machine based on a Cooper chassis. Engine will likely be the 2.5-liter, four-cylinder Maserati driving into a super lightweight gearbox, also under construction in Modena. Reports are that the project is for Rob Walker, known for his successful stable of Coopers . . . 1959 production of 3.5-liter Maserati Gran Turismo coupes is scheduled for two per day. Hôme consumption has taken many of the GT coupes so that few find their way to the U.S. During the first production run, 46 cars were sold in Milan alone. Look for a 1500cc Maserati GT car, possibly due by mid-1959. Another Maserati product for '59 will be a two-liter sportscar based on the Formula I machine with lightweight space frame, de Dion rear axle and five-speed gearbox in unit with differential. Power from the four-cylinder engine to be used is estimated at 210 bhp . . . Ferrari production is up—two coupes per week by Farina and two per week of the Scaglietti California convertibles. Again, many of these for the home market—16 of the 1959 coupes sold in Milan . . . Osca planning a rear-engined 750cc car, chassis design by Collotti.

FRANCE French auto makers should be happy with sales figures being racked up in the U.S. market. California, admittedly a hotbed of imported car activity, has been especially fertile ground for Renault, whose Dauphine outsold Volkswagen during August—a fact which must be balanced against VW availability during the same period . . . Peugeot, most recent French export to the U.S., will achieve its 1958 sales goal of 8000 vehicles, expects to sell 12,000 cars in 1959 . . . Citroën's line for 1959 includes a luxury version of the DS-19, intended to be chauffeur driven. A glass division affords privacy in the rear seat, which is virtually a mobile office. A radio, radio-telephone, desk, electric clock and microphone to talk with the driver should make the tired executive feel at home . . . The Simca Aronde gets a new series of bodies for '59. Main elements are oval grille, lower hood line and more glass area all around. Engines are basically the same with minor detail changes. Soaring French fuel taxes prompted the introduction of an economy model for the home market with a 40-hp, 1089cc engine.

ENGLAND The British Motor Corp. produced and sold 504,712 vehicles during the fiscal year ending July 31, an all-time record for any British or European manufacturer. Export deliveries were up and the firm earned $75 million from U.S. sources, taking the lead from Australia for the first time. Apart from deliveries of complete and unassembled vehicles in nearly every country of the world, BMC is also selling engines and transmissions to manufacturers in the U.S., Germany, Spain and China for use in their production

continued on page 54

TWO VIEWS OF ABARTH 750cc COUPE AND ITS TWIN-CAM ENGINE.



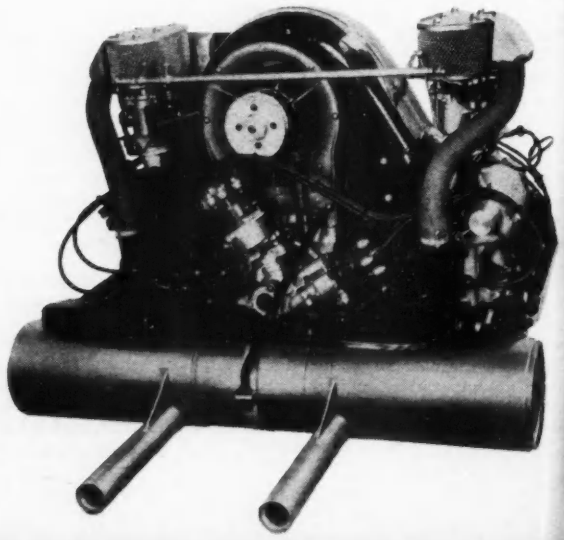
AROUND THE WORLD IN 30 DAYS

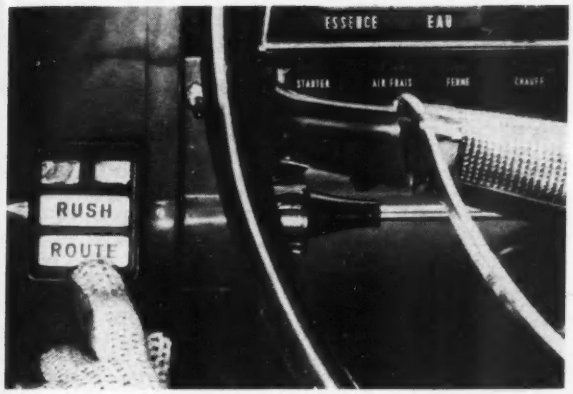
RENAULT'S NEWEST

This sports Dauphine, probably to be called the Caravel, will be available in three models—coupe, convertible and removable hardtop versions. Body design is result of studies by both Renault and an unnamed Italian group. Individual seats in front are fully adjustable and the occasional rear seat folds flat to provide extra luggage space. Rate of production will be determined by orders from France and abroad. U.S. price is expected to be between $2500 and $3000.

LATEST CARRERA

New Porsche Carreras will be delivered with this larger engine displacing exactly 1587.5cc. The plain bearing crankshaft should improve reliability and cut service costs. Compression is 9.5 to 1 and output is 105 hp (D.I.N.) at 6500 rpm. Reports are that this version has touring-car engine flexibility.



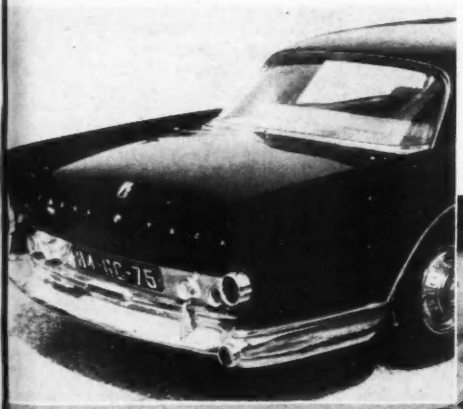


PUSHBUTTON SIMCA

Available as an option on Vedettes, the Rushmatic transmission provides flexible gear selection. Driver shifts manually to third, then presses "Rush" to get an automatic shift to fourth at 68 mph and an automatic downshift to third below 56 mph. "Route" gets fourth above 31 mph and third is available on accelerator kickdown.

CARGO-CARRYING CITROËN

Citroën's new ID-19 station wagon should have great U.S. appeal. The "Break" version will seat eight people as a passenger vehicle. As a cargo wagon, the seats fold down, revealing a huge flat payload area. An ingenious tailgate swings down under the rear floor for loading which is almost at ground level when the suspension system is lowered. Load capacity is three people in front plus 1100 pounds of freight.



FACEL VEGA

Minor refinements and improvements are all that is claimed by Facel Vega for 1959, in order that they not inconvenience existing owners. Shown here is the Excellence, a handsome pillarless four-door model capable of 125 mph.

AROUND THE WORLD

continued from page 51

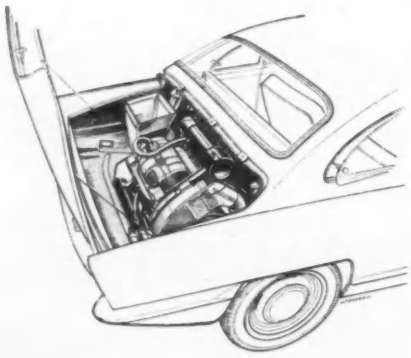
. . . Jaguar's Mark IX sedan will supplement, not replace, the luxury Mark VIII. Four-wheel disc brakes are standard and a larger engine, 3.8 liters, delivers 225 hp. Maximum speed is approximately 110 mph and the car is equipped with power steering. Appearance is similar to the Mark VIII. Company is making a bid to pass their best U.S. sales figures by 50 per cent in 1959 . . . Alvis adds two new body styles to their line, a convertible and two-door hardtop. Designed by Graber of Switzerland, they are built by Park Ward in London. Mechanical specifications remain the same with the three-liter, 104-bhp engine. Price in England without purchase tax will be about $5600 . . . Export deliveries will begin in the spring of 1959 on an all-new three-liter Rover fast touring car. The 115-bhp engine is the customary F-head design developed from the 90- and 105-hp units. Mechanical refinements include seven main bearings, roller tappets and a hydraulic tensioner on the timing chain. Rover has abandoned their own automatic transmission in favor of the Borg-Warner as an optional extra. Body is unit con-

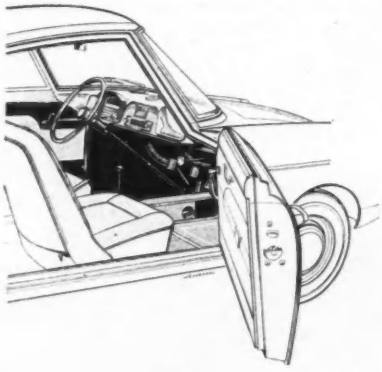
NSU MINIATURE SPORTSCAR

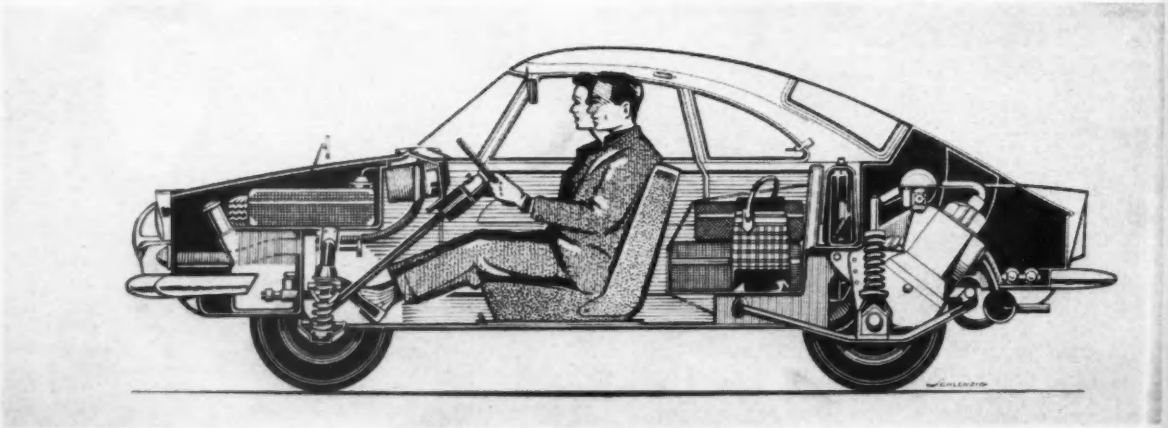
Based on the NSU Prinz sedan, introduced early this year, the Sport Prinz is a handsome addition to the line. Body styling is the work of Bertone, the Italian firm, and lines are similar to the Alfa Giulietta Sprint coupe. Powerplant is a vertical two-cylinder, air-cooled, rear-mounted engine which displaces 583cc and turns out about 30 hp at 5700 rpm. Engine, four-speed gearbox and differential are mounted in a unit. Four-wheel independent suspension and rack-and-pinion steering aid handling.

Seating is provided by two individual seats in front and a rear area which will accommodate two children or a large amount of luggage.

Acceleration and speeds in gears are remarkable for such a small machine. First gear gives 19 mph; second, 38 mph; third, 61 mph and top speed is 85. Zero to 40 mph takes just under 10 seconds. Production starts at the end of this year and the price in Germany is to be about $1540.





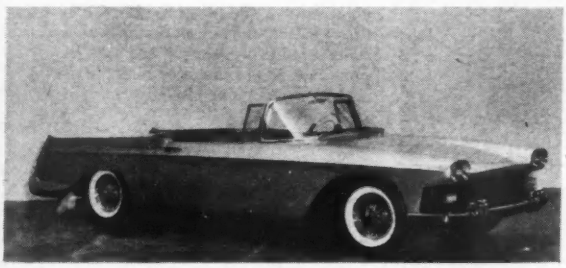


struction and engine, gearbox, steering and front suspension are mounted on a detachable sub frame, rubber-insulated from the main body. Front suspension is new, using wishbones and laminated torsion bars . . . For the second time in 18 months, there has been a change in the organization of the Frisky car project. Henry Meadows Ltd., have disposed of their controlling interest and firm will now be called Frisky Cars Ltd. New versions, styled by Giovanni Michelotti, in both hardtop coupe and open sports form, will retail for about $1400 in Britain . . . For the first time in many years Rolls-Royce offers a convertible coupe body with coachwork by H. J. Mulliner on a Silver Cloud chassis. It will be available on special order.

GERMANY First shipments of NSU Prinz automobiles will be in New York by the time this reaches the newsstands. Further shipments are under way to distributors in Houston and Portland, Ore. Performance of these tiny machines is attested to by a race on the Nurburgring on October 5 when they won the first four places in the 750cc class. Average speed of the winning Prinz over the rugged course was 58.5 mph . . . Messerschmitt has expanded distribution and their TG-500 is now available in England. The new model is considerably changed from the machine which was imported to the U.S. a few years ago and appears much improved. Performance from the two-cylinder 490cc engine is eye-opening for a cabin scooter. A four-speed gearbox gets the machine from zero to 44 mph in 7.2 seconds and to 50 mph in 14.5 seconds. A speed of 65 mph is possible in third gear and top speed is near 90 mph. Price in England is about $1200 without purchase tax.

ASTON MARTIN GOES ITALIAN

Newest Aston Martin, the DB-4, is the result of close collaboration between Aston and Carrozzeria Touring of Milan. Italian workmen are instructing British coachbuilders in their super-light methods of construction. The DB-4, which will appear at the New York show in April, carries a 3.7-liter, 263-hp engine. It will accelerate to 100 mph and stop again in less than 30 seconds.



FARINA STYLES A CADILLAC

Pinin Farina has brought out the beauty inherent in simple design in this convertible on a Cadillac chassis. Straight, thin lines emphasize the car's sleek appearance, and slender tail fins with a moderate sweep are a decided improvement upon those originally designed for the car. A simplified grille treatment is well integrated. Cadillac's design department might do well to study the ideas expressed in this foreign-customized automobile.

WORLD'S FASTEST TOURING SPORTSCAR

Latest external wrapping for Ferrari's 410 SuperAmerica series is this coupe body by Farina. Considered the world's fastest touring sportscar, its V-12, 4.9-liter engine develops 400 hp. Strictly a two-seater, the car has a huge luggage compartment and is intended for prolonged open-road running. Farina has developed a three-position door lever (open, shut and safety) for this car which is said to be a safety device useful when there are children aboard.

STANDARD-TRIUMPH UTILIZES ITALIAN DESIGNER

The Standard and Triumph line for 1959 will show the first influence of the work of Italian designer Michelotti, now styling Standard and Triumph production cars. His modifications on the Vanguard (now Vanguard III) include deep headlight cowls, new grille, deeper windshield and rear window, revised rear lights and new interior trim which includes a padded dash and new carpeting material. Versions of the Standard sedans and station wagons are imported to the U.S. and sold under the Triumph name.

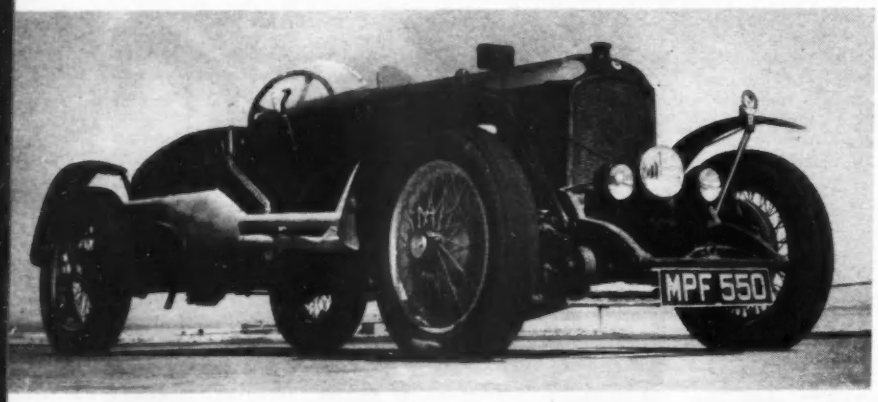
RESTYLED HILLMAN HAS MORE HORSEPOWER

Hillman's 1959 look includes a moderate face-lifting job and major improvements under the hood. An all-chrome grille, new color combinations and restyled seats and instrument panel blend into an attractive package. Displacement and power are up to 1494cc and 52.5 bhp while a 4.55 to 1 rear axle ratio offers greater economy. Increased top gear acceleration is claimed with this ratio. Steering is by a new recirculating ball-type unit which is said to be light and positive at all speeds. /MT

CLASSICOMMENTS

by Robert J. Gottlieb
Classic Car Editor

THIS MAY SOUND INCONCEIVABLE but we know for a fact that $30,000 was spent recently in the restoration of a single car, and that $60,000 was spent in the restoration of another. In each case the cars were better than when new and no single part was overlooked in the process. The average person spends between $1000 and $4000 to restore a car. Whatever the amount, it is certainly sizable. This brings us to the crux of our thought: A beautifully restored car is invariably damaged by unthinking persons when it is displayed. There seems to be no solution to the problem except to rope off the cars and have them heavily guarded at all times.



ROCKET PILOT'S 30-98 Vauxhall built in 1924 features many interesting details like counterbalanced crankshaft, twin SU carbs and special transmission. The car belonged to the late Air Force Capt. Iven Kincheloe and is for sale.

Leather used during the classic era to cover a rooftop was a very special leather. It was much thicker and costlier than the average hides used for upholstery. A local enthusiast went to tremendous expense to locate this special leather and install it on his car. The first time the car was shown, someone ripped it with his fingernail, exclaiming as he did so, "This can't be real leather!"

Unthinking mothers have posed their children, replete with hobnailed shoes, on aluminum hoods and highly lacquered finishes. Many a Lincoln owner has lost his greyhound radiator ornament because of people who wanted to see "how the cap comes off." Packard owners are unhappy with broken door handles forced the wrong way by people who wanted to see how the doors open. It boils down to this—if we want to save our cars we must educate the public to look with their eyes and not with their hands.

Jay White of Pocatello, Idaho requests a lead on where to purchase tubeless tires for a 17-inch wheel. We don't know of any tubeless tires in this size—and they couldn't be used with a wire wheel because air would escape through the spoke openings.

The great debate over whether a car is classic or not classic seems to be an elementary one among enthusiasts. Those who have been in the hobby for a long time leave discussions of this type to newer members of the fraternity. Older (in length of time) enthusiasts argue vehemently on the authenticity-originality theories. When a car is restored at great expense, should it be brought back to original condition or should it be brought back to authentic condition? What is the difference between an authentic car and an original car? Perhaps defining would help.

An "original" car is one which has been restored in such a manner that it bears the same paint, the same type of upholstery, and the same type of plating as when new. If a specific Packard or Lincoln was painted midnight blue when new, it must be repainted midnight blue to be original. (Of course, a car with the original paint job is a likely candidate for that esteemed classification known as original.) If parts that were originally nickel-plated are chromeplated, the car may be restored, but it is not original.

An "authentic" car is one restored to showroom condition with variations from the original. In other words, if a given midnight blue Packard or Lincoln is repainted gray, or if the original brown leather upholstery is replaced with red leather, the car is authentic, providing the manufacturer offered gray paint or red leather upholstering as an option. If the manufacturer did not offer a gray color to the public and a car is painted gray, it is neither original nor authentic.

In any concours d'elegance, authenticity and originality score heavily on judges' scorepads. Points are usually subtracted if a car is neither original nor authentic. The prevailing consensus seems to be that an original car merits more points than an authentic car. A car which is neither stands little chance of winning in a concours.

Dyed-in-the-wool enthusiasts make only one exception, and that's for one-of-a-kind classics. A one-of-a-kind car is a vehicle separate and apart from any other. A certain manufacturer or a certain body builder may have built one only of a particular model; it is generally a car made on special order at the request of a wealthy consumer.

Enthusiasts generally accept a one-of-a-kind classic painted in a different color from the original. They reason that the original purchaser, in ordering a special-built body, could have ordered red instead of a flashy blue or cinnamon brown, so why not let the present-day owner change the color scheme, both as to surface paint as well as to upholstery. One word of caution: classic enthusiasts don't go for flame-painting.

Ripples on aluminum panel surfaces were quite prevalent on handmade bodies. Assuming the panel was not damaged in an accident, the only known way of eliminating ripples is to block-sand them. After the initial sanding, prime the panel and block-sand it thoroughly in a vertical plane. Then block-sand it again in a horizontal plane. Prime again and repeat the operation. Sometimes it takes from eight to 10 cycles of this procedure to acquire a smooth foundation so necessary for a mirror-like paint finish.

We can remember when the first classic car was restored in this country. It wasn't so very many years ago that there were no classic car clubs, no group of enthusiasts banded together by a single ideal, and the word "classic" was not even coined in its application to cars.

Nowadays we have almost as many enthusiasts as there are cars, and clubs have sprung into being throughout the nation. This is a healthy sign. It can mean only one thing for the future—and that is growth.

Unfortunately, a few of the larger clubs are going overboard in insisting that their members appear at meets wearing costumes of the era in which the car was built. A rule such as this is ridiculous! Better than 75 per cent of the enthusiasts are interested in the cars *for what they are*, and not because they are exhibitionists driving unusual cars in (to

GARB AND CARS that don't mix are growing peeve of true classic fans.

say the least) unusual clothes. We know many enthusiasts who will not participate in monthly outings because they wouldn't be seen dead in the types of clothes worn by other enthusiasts. The feelings of some are so high, that they don't want to be associated with, or seen in public with, a group of people dressed so differently.

Another observation. Those clubs which insist on costumes have not been strict in requiring the costume to suit the year of the owner's car. The result is a sideshow of owners of late '30 cars dressed in clothing of the flapper era, owners of early '40 cars dressed in the styles of 1910.

Let's try to keep the classic cars for classic enthusiasts, and let's leave the old clothing to persons who have a genuine interest in old clothing. At a recent meet, every woman dressed in costume wore a "headache band." We don't know their purpose or why they were ever used in the first place, but they appear to be a string of ribbon or elastic tightly bound about the forehead and skull. A group of classic car owners dressed in "headache bands," knee-length skirts, strings of beads that droop below the knees, and hats that look like inverted cuspidors, detract from—rather than add to—the desired aura which should surround every revered classic automobile.

Seems like someone else agrees with us that the Lincoln Continental is not a classic. A Lincoln Owner's Club is presently being formed and will include all Lincolns made from 1920 to the end of the K series. The Lincoln Zephyr and Continental will not be included. If you live west of the Mississippi, contact: Anthony T. Heinsbergen, 7415 Beverly Blvd., Los Angeles 36, Calif. If you live east of the Mississippi, contact: J. Miles O'Brien, M.D., 735 Clinton Ave., Bridgeport 4, Conn.

We recently witnessed a most interesting temporary repair—one we would have sworn couldn't work. Seems that a classic developed front-wheel-bearing trouble. In addition to the bearings being rough, the race itself was pretty well mangled. A replacement bearing was unobtainable at the time, so the owner removed the race and turned it 180 degrees. To our surprise the growl and vibration completely disappeared, and we were able to drive home. The explanation? Reversing the race 180 degrees applied bearing pressure to the good part of the race, enabling the car to be driven.

Charles Roote of Shreveport, La., was wondering about the special Lincoln built in 1935 for President Roosevelt. As we recall the car it was a '36, not a '35. The body, by Brunn, was mounted on a lengthened K-Model chassis. It was a four-door convertible, equipped to the nth degree, including bullet-proof glass. We seem to recall pictures of President Truman in the same vehicle. The last we heard of it, it was in a museum on the East Coast.

The Roosevelt Lincoln (160-inch wheelbase) was surpassed in size but not in beauty by a Cadillac built in 1938. The Cad was better than 22 feet long overall, had a V-16 engine, and presented such a long, bulky appearance that it was actually grotesque.

SMALLER CARS

OVERALL SIZE AND SEATING CAPACITY	POWER AND DRIVE TRAIN	ECONOMY
AUSTIN A-40 2 dr. Sedan-Wagon ($1795) Gr. Britain 12 ft. long by 5 ft. wide. Seats 4 adults comfortably; rear seat folds flat for use as station wagon.	34-hp ohv 4—the proven BMC "A" type engine. 4-speed manual transmission.	Has exceeded 40 mpg in factory tests.
AUSTIN-HEALEY SPRITE Roadster ($1795) Gr. Britain 11.4 ft. long by 4.4 ft. wide—small size makes it easy to maneuver. Seats 2 in individual bucket seats.	48-hp ohv 4—BMC's "A" type, hopped up but reliable. Floor-mounted lever for 4-speed transmission.	25-35 mpg, depending on driving habits.
AUTO-UNION (DKW) 2-dr. Sedan ($1995) Germany 14.1 ft. long 5.5 ft. wide. Seats 4 adults in comfort, will accommodate 5.	45-hp 3-cyl. 2-cycle with front-wheel drive. 4-speed manual transmission; clutchless Saxomat optional.	22-30 mpg.
BERKELEY Roadster ($1595) Gr. Britain 10.3 ft. long by 4.2 ft. wide. Seats 2 only.	18-hp air-cooled 2-cycle 2-cyl. 3-speed gearbox with front-wheel drive.	Mileage claimed in excess of 50 mpg.
CITROEN 2-CV 4-dr. Sedan ($1258) France 12.4 ft. long by 4.9 ft. wide. Seats 4 adults.	12-hp 2-cyl. opposed air-cooled, front-wheel drive. 4-speed transmission with centrifugal clutch.	One of the best. 50 mpg plus on regular fuel.
DATSUN 4-dr. Sedan ($1799) Japan 12.6 ft. long by 4.8 ft. wide. Space and legroom for 4 adults.	40-hp ohv 4 with oversquare bore and stroke. 4-speed gearbox with column shift.	Up to 35 mpg, excellent considering car's weight of over 2500 pounds.
DYNA-PANHARD Standard 4-dr. Sedan ($1695) France 15 ft. long by 5.3 ft. wide. Will accommodate 6 adults in comfort.	50-hp from 2-cyl. air-cooled flat opposed engine. 4-speed manual transmission with overdrive 4th.	35-42 mpg.
FIAT 600 2-dr. Sedan ($1298) Italy 11.7 ft. long by 4.7 ft. wide. Seats 4 adults.	22-hp ohv 4, rear mounted. 4-speed manual transmission.	40 mpg in normal operation.
FIAT 1100 4-dr. Sedan ($1683) Italy 12.5 ft. long by 4.8 ft. wide. Will seat 5 adults, but 4 are more comfortable.	43-hp ohv 4 with 4-speed column shift transmission.	Capable of 30-32 mpg.
FORD ANGLIA Standard 2-dr. Sedan ($1442) Gr. Britain 12.5 ft. long by 5 ft. wide. Seats 4 adults or 5 for short trips.	36-hp side-valve 4. 3-speed manual transmission.	27 mpg in city; up to 34 on open road.
GOGGOMOBIL 400 2-dr. Sedan ($1160) Germany 9.5 ft. long by 4.2 wide. Seats 2 in front with rear seat for 1 adult, 2 on occasion.	20-hp ohv 2-cyl., 2-stroke, air-cooled. 4-speed transmission with all 4 gears synchronized.	A thrifty 45 mpg.
GOLIATH 1100 2-dr. Sedan ($1995) Germany 13.3 ft. long by 5.4 ft. wide. Designed for 2 passengers in front, 2 in rear with a 3rd occasionally.	55-hp ohv flat opposed 4, water-cooled. 4-speed all-synchro gearbox, column shift.	About 35 mpg during conservative driving.
HILLMAN-MINX Special 4-dr. Sedan ($1699) Gr. Britain 13.7 ft. long by 5.1 ft. wide. Designed for 5 adults.	52.5 hp ohv 4. 4-speed gearbox, synchro on top 3.	25-30 mpg, depending upon conditions.
LLOYD 600 2-dr. Sedan ($1395) Germany 11.1 ft. long by 4.6 ft. wide. Seats 4 adults in snug comfort.	24-hp air-cooled 2 cyl. with overhead cam; 4-speed all-synchro gearbox.	Will give up to 52 mpg with careful driving.
METROPOLITAN 1500 Hardtop Coupe ($1626) Gr. Britain 12.5 ft. long by 5.1 ft. wide. Room for 2 adults with occasional rear seat for children or 1 adult.	52-hp ohv 4—the BMC "B" type engine. 3-speed manual column shift gearbox.	About 25 mpg for combined city and open country.
MORRIS 1000 2-dr. Sedan ($1495) Gr. Britain 12.3 ft. long by 5.1 ft. wide. Seats 4 comfortably but will take 5 friendly adults.	37-hp ohv 4—BMC's "A" type engine. Sturdy 4-speed gearbox, synchro on top 3.	30-40 mpg, depending upon driver's habits.
OPEL REKORD 2-dr. Sedan ($1957) Germany 14.5 ft. long by 5.3 ft. wide. Seats 5 adults.	56-hp ohv 4. 3-speed gearbox with column shift.	25-30 mpg.
RAMBLER AMERICAN 2-dr. Sedan ($1754) U.S. 14.8 ft. long by 6.1 ft. wide. Will seat 6 adults but 5 will find better accommodations.	90-hp 6-cyl. L-head. 3-speed manual transmission; overdrive or automatic optional.	Mileage range from 20-24 mpg for most driving.
RAMBLER SIX 2-dr. Sedan ($1918) U.S. 15.9 ft. long by 6 ft. wide. Ample seating for 6.	127 hp ohv 6. 3-speed manual transmission; overdrive or automatic optional.	17-21 mpg; less with automatic transmission, more with overdrive.
RENAULT DAUPHINE 4-dr. Sedan ($1645) France 12.9 ft. long by 5 ft. wide. Will seat 6 but 5 are more comfortable, and 4 even more so.	32-hp ohv 4, rear mounted. 3-speed transmission, top 2 gears synchronized.	Mileage-minded drivers can get 40 mpg or more.
SAAB 93-B 2-dr. Sedan ($1895) Sweden 13.1 ft. long by 5.2 ft. wide. Comfortable accommodations for 4 adults.	38-hp 3-cyl. 2-cycle (must mix oil with gas). 3-speed transmission and front-wheel drive.	25-35 mpg—free wheeling helps mileage.
SIMCA ARONDE 4-dr. Sedan ($1645) France 13.5 ft. long by 5.1 ft. wide. Will seat 6, but designed for 4.	48-hp ohv 4. 4-speed manual transmission with column shift.	35-40 mpg.
SKODA S-440 Deluxe 2-dr. Sedan ($1686) Czechoslovakia 13.3 ft. long by 5.3 ft. wide. Room for 5 adults.	46-hp ohv 4. 4-speed manual transmission with top 3 gears synchronized.	Up to 40 mpg is claimed.
STUDEBAKER LARK 2-dr. Sedan (price not available at press-time) U.S. 14.6 ft. long by 5.75 ft. wide. Adequate space for 6.	90-hp 6-cyl. L-head. 3-speed manual transmission, with overdrive or automatic optional.	Mileage ranges from 16-20 mpg, depending upon choice of transmission.
TRIUMPH 4-dr. Sedan ($1699) Gr. Britain 12.1 ft. long by 4.8 ft. wide. Seats 4 adults.	40-hp ohv 4. 4-speed gearbox, top 3 synchro.	Up to 40 mpg possible.
VAUXHALL VICTOR 4-dr. Sedan ($1957) Gr. Britain 13.9 ft. long by 5.2 ft. wide. Good seating for 5 adults.	55-hp L-head 4. 3-speed column shift.	28-31 mpg possible.
VOLKSWAGEN 2-dr. Sedan ($1545) Germany 13.4 ft. long by 5.1 ft. wide. Will seat 5 but 4 adults are more comfortable.	36-hp air-cooled, opposed 4 in rear. 4-speed manual transmission with floor shift.	32-40 mpg, depending upon traffic and driving habits.

Prices are New York port-of-entry figures which may vary from other U.S. ports and inland cities.

UNDER $2000

PERFORMANCE	SERVICE FACILITIES AND MAINTENANCE	OTHER MODELS AVAILABLE
		AUSTIN A-40
Stays with traffic easily; will exceed 70 mph top speed.	Excellent dealer setup nationally, with plenty of parts. Car is reliable, needs little service.	Saloon body is only A-40 in production.
		AUSTIN-HEALEY SPRITE
Gets to 60 mph in about 20 seconds, cruises 60-65 mph easily. No trouble staying with traffic.	Utilizes extensive BMC dealer setup; many Morris and Austin parts. Reliable and easy to repair sportscar.	Only model available.
		AUTO-UNION (DKW)
To 60 in about 30 seconds; cruises smoothly at 70-plus.	Dealers in larger cities, limited service elsewhere. Seven-moving-part engine requires little care.	2-dr. hdtp. ($2195), 4-dr. sed. ($2395), sta. wag. ($2495).
		BERKELEY
Hard pressed to keep with traffic; maximum speed about 55 mph.	Limited dealers on East and West Coasts. Simple construction, many motorcycle parts make repairs cheap.	30 hp, 3-cyl. model ($1895).
		CITROEN 2-CV
Cruises 45-50 mph, with 60 mph top speed. Has difficulty staying with traffic.	Dealers in most major cities. Repairs almost unheard-of; car is trouble-free and near indestructible.	Only one available.
		DATSUN
Cruises 50-55 mph; top speed near 70 mph.	Distribution extremely limited at present. Conventional design, rugged components should keep repairs minimal.	Sta. wag. available soon.
		DYNA PANHARD
Accelerates to 60 mph in 30 seconds; will cruise at 80.	Dealers in most major cities. Few maintenance problems from this sturdy automobile.	Special 4-dr. sed. ($1795), Deluxe 4-dr. sed. ($1995).
		FIAT 600
Has to push to keep up with traffic; cruises at 45 mph.	Dealer setup growing; currently best in larger cities. Easy to work on and parts inexpensive.	Multipla sta. wag. ($1598), 2-dr. conv. ($1360).
		FIAT 1100
Stays up with fast traffic; cruises easily at 60-65 mph.	Service best in major cities and spreading rapidly. Good reliability means few and inexpensive repairs.	4-dr. sta. wag. ($2069).
		FORD ANGLIA
Cruising speed about 55 mph.	Most Ford dealers will service or can advise. Parts and labor costs nominal.	Prefect Standard 4-dr. sed. ($1495), Squire 2-dr. sta. wag. ($1739), Escort 2-dr. sta. wag. ($1629).
		GOGGOMOBIL
Cruises at 50 mph; 55 mph top speed. Will not easily stay with full-size car traffic.	Limited U.S. distribution, even in major cities. Simplicity makes it easy and cheap to service.	Florida 2-dr. sunroof ($1280), coupe de Ville ($1560), van ($1460).
		GOLIATH
Accelerates to 60 in just over 20 seconds; cruises at 60-65 without effort.	Limited dealers in major cities but expanding. Reliability factor good; easy and inexpensive to service.	Sta. wag. ($2195), conv ($2211).
		HILLMAN MINX
Top speed about 75 with good acceleration in relation to comparable cars. Cruises at 60 mph, stays with traffic.	Over 600 dealers nationally, one of the best setups. Parts and service costs generally nominal.	Deluxe 4-dr. sed. ($1849), conv. ($2099), Husky sta. wag. ($1685), sta. wag. ($2299).
		LLOYD
60 mph cruising and 70 mph top speed.	Dealers and service limited to East and West Coasts. Few repairs needed and parts nominally priced.	2-dr. sta. wag. ($1445), 2-dr. 6-pass. sta. wag. ($1665), 2-dr. conv. ($1510).
		METROPOLITAN
Cruises at 55-60 mph; stays with city and freeway traffic.	Excellent service at all American Motors dealers. Owners report few repairs needed	Conv. ($1650).
		MORRIS 1000
Gets to 60 mph in about 28 seconds; will cruise at 70 mph.	Large dealer network with well-trained personnel. Good parts stock at reasonable prices.	4-dr. sed. ($1678), conv. ($1574), sta. wag. ($1798).
		OPEL REKORD
60-65 mph cruising speed, with about 77 mph maximum.	Selected Buick dealers sell and service in U.S. Maintenance costs comparable to compact Detroit cars.	Caravan 2-dr. sta. wag. ($2370).
		RAMBLER AMERICAN
Gets to 60 mph in 19.3 seconds; cruises at easy 70.	Large network of American Motors dealers with more being added in U.S. Car has trouble-free reputation.	2-dr. sta. wag. ($1884).
		RAMBLER SIX
Accelerates to 60 mph in 18 seconds; cruises at 80 mph.	All American Motors dealers service. Prices comparable to smaller American cars.	2-dr. hdtp. ($2141), 2-dr. sta. wag. ($2345).
		RENAULT DAUPHINE
Cruises at 60 mph or above; no trouble staying with traffic.	Many dealers across U.S. and still growing. Parts situation among the best and repair prices nominal.	4-CV 4-dr. sed. ($1345).
		SAAB 93-B
Will cruise at 60 but slowed by hills; top speed about 85 mph.	Distribution limited to East Coast. Car has good record of reliability and low upkeep cost.	2-dr. sunroof sed. ($2019), Gran Turismo 2-dr. sed. ($2568).
		SIMCA ARONDE
Top speed near 85; cruises easily at 65 and will stay comfortably with traffic.	Good distribution nationally with dealers in most cities. Parts and service costs moderate.	Elysee 4-dr. sed. ($1745), Montlhery 4-dr. sed. ($1810), Grand Large hdtp. ($1980), Chatelaine 2-dr. wag. ($1875).
		SKODA S-440
Cruises 55-60, with 68 mph top speed.	Some dealers on East Coast and a few in the West but virtually none between. No service history available.	S-445 deluxe 2-dr. sed. ($1787).
		STUDEBAKER LARK
Gets to 60 mph in 18 seconds and will cruise at an easy 70 mph.	Dealers and service well distributed throughout country. No record of maintenance but seems reliable.	4-dr. sed., 2-dr. hdtp., 2-dr. sta. wag., V8 or 6-cyl. (price not announced as of presstime).
		TRIUMPH
Will stay with traffic but must be pressed. Will cruise at 60-65 mph.	Good dealer network with ample parts supply in most cities. Repair costs are nominal.	4-dr. sta. wag. ($1899).
		VAUXHALL VICTOR
Top speed about 72 mph with 60-65 cruising.	Selected Pontiac dealers sell and maintain. No serious repair problems.	4-dr. sta. wag. ($2370).
		VOLKSWAGEN
Stays with traffic and cruises at top speed of 75 mph.	One of the pioneer dealer networks with well-equipped repair facilities across the U.S. Repairs nominal.	2-dr. sunroof ($1625), conv. ($2045), Kombi ($2045), Ghia cpe. ($2445), Ghia conv. ($2725).

Not included are transportation fees, state and local taxes or optional equipment.

HANDY hints

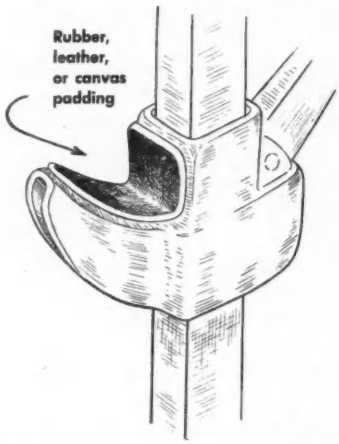
by Rodger Darling

GET YOUR HEATER READY—Summer driving stirs up sediment that will work even into a shut-off heater where, with little circulation, it settles and clogs the tiny heater-core passages—and some cool morning you'll say, "Brrrr!" So when you give the cooling system its fall flushing, flush the heater too. Disconnect the heater hoses and hold the garden hose to the heater's lower fitting. Turn the water on slowly and you'll be surprised at the "coffee grounds" that gurgle out the top. Then flush in the other direction till the water runs clear.

WINDSHIELD WIPER TIPS—Before they have to begin their big battle of shoving aside winter's snow, sleet and rain, *make sure* your windshield wipers haven't shifted so that they no longer sweep a full arc nor position properly when shut off. To reset: remove wiper arm, start engine, turn on wiper motor, then switch it off and replace the arm in proper "off" position. Now is the time to add a drop of oil to the often-neglected pivot and to replace sun-baked, saw-toothed blades.

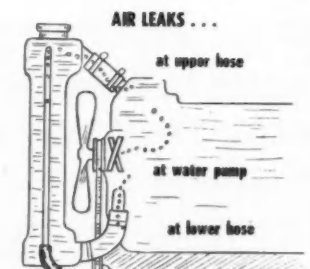
FRAME SQUARE?—If your friendly service station dealer will let you putter around while your car is on his greasing lift, here's how to check if a frame is out of line: Tie two strings across the car bottom to diagonally opposite corners of the frame, connecting two identical parts in the rear (such as spring shackles) with two identical parts in the front (shock absorbers, etc.). If the lift or underbody parts are in the way, you can use a plumb-bob to accurately chalk these four points on the garage floor. The two criss-cross lines connecting the points should measure the same length if the frame is in true square.

JACK PAD PROTECTS BUMPER—To save your sleek, shiny, siliconized bumpers from having chrome-undermining scratches bitten into them by the bumper jack, pad the jaw of



the jack with a piece of strong canvas, leather (a shoe tongue), or rubber (tire sidewall is good) cemented or shellacked in place as shown in illustration.

CAP CLUE—"We find seven out of 10 radiator pressure caps over two years old to be faulty," service station attendants say. Good clue to a bad cap is frequent low water in the radiator with no signs of leakage.



CHECK YOUR CAR'S COOLING SYSTEM—Less noticeable but more damaging than water leaking OUT is: (1) air leaking IN (causing rapid rusting, foaming, boiling over, and loss of anti-freeze); (2) leakage of coolant into cylinders (causing sludge and varnish) which also allows exhaust gas to penetrate the water jacket (forming sulphuric acid that quickly corrodes the cooling system). Check for (1) by filling the radiator to normal level and connecting a small hose to the overflow pipe, immersing other end in a jar of water. (A pressurized system must be released. If cap then fits too loosely, remove and look into radiator itself, omitting hose and jar.) Continued bubbling when warmed-up engine is run rapidly indicates air being drawn in through faulty hose or pump connections. To test for (2), remove thermostat, fill system to level shown, and race engine. Bubbles reveal exhaust forced into coolant through cracks or faulty gasket.

FIRST PRIZE goes to Julius Weitmann for his dramatic portrait of Mike Hawthorn in a Ferrari on the Nurburgring.

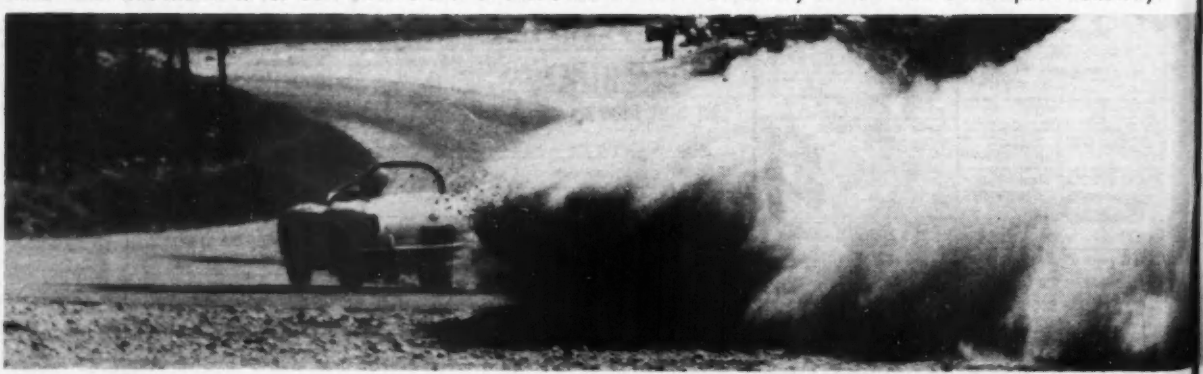
THE EDITORS OF MOTOR TREND are looking for the three best photos or sequences of photos taken each month in the field of motor sports. And this includes all forms of motorized racing on land or water—anything that is exciting and pictorial. Picture quality, good composition, current news value and photos that tell a story are what we want.

First prize is $25, second $15 and third award is $10. If we select a picture sequence, we will pay the place award for the first photo plus an extra $7.50 for each additional photograph published in the series.

Please identify all photos with names, dates, locations and pertinent caption data. Contest is open to amateurs and professionals alike. Photos should be black and white glossy prints, four by five inches minimum size. Please do not send negatives. Photos cannot be returned.

Send all entries to MOTOR TREND, Motor Sports Pictorial Contest, 5959 Hollywood Blvd., Los Angeles 28, Calif.

THIRD PRIZE this month is for Carl Smith's shot of Jim Silberman's Alfa recovery at New York's Thompson Raceway.



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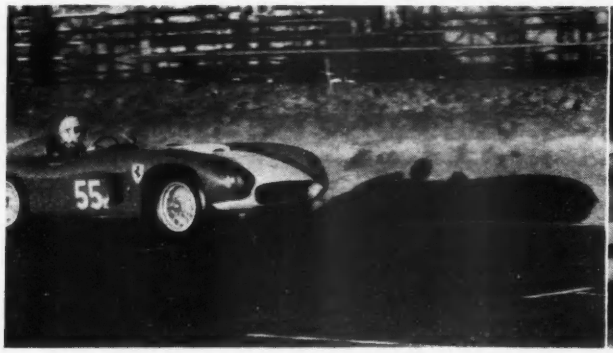
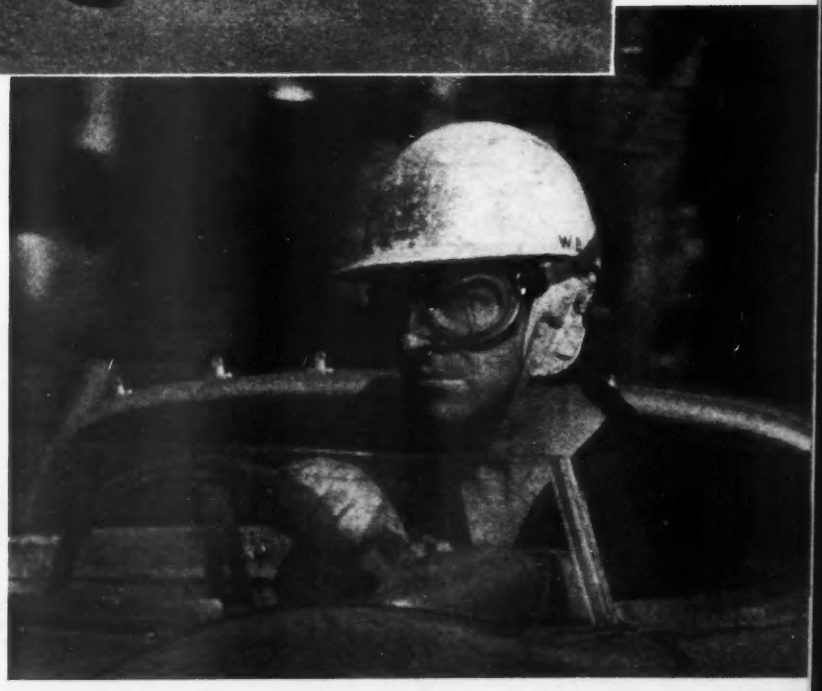


ME AND MY SHADOW describes Lester Nehamkin's action photo of Sam Weiss in his Testa Rossa Ferrari under a late afternoon sun during a recent race meet at Vaca Valley, Calif.

GRAHAM HILL surveys the remains of his Lotus during the Grand Prix of Portugal. Sgt. Phillip J. Quint shot this with a box camera.

SECOND AWARD is to John LeBaron, who caught two Go-Kart novices at Santa Rosa, Calif., trying to decide where the course goes.

photo contest



DETERMINATION is etched in the face of Count Wolfgang von Trips piloting his Porsche at the Gaisberg, Austria Hill Climb. Photo is by Julius Weitmann.

MT Goes To...

FIRST WESTERN G

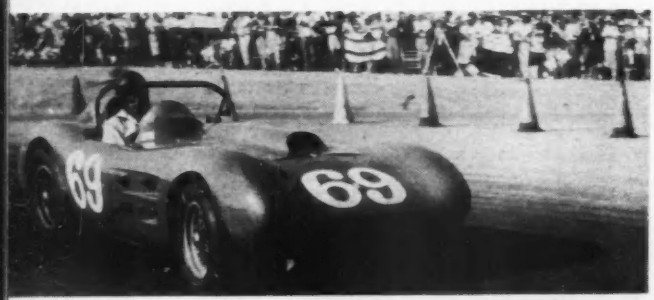
BONNIER

GREGORY

DAIGH

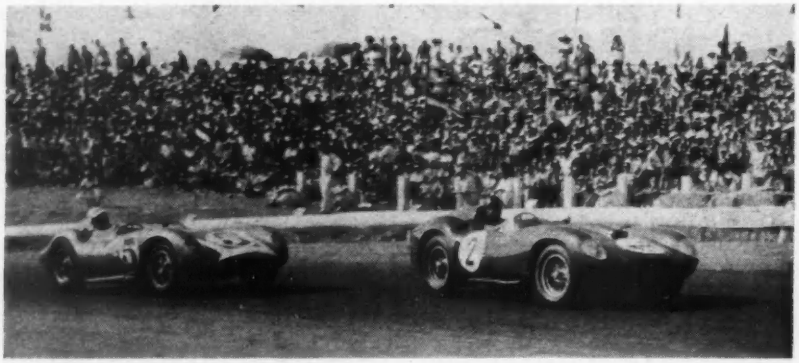
HILL

BEHRA



RAPID RUNNERS-UP who collected second through fifth places were Dan Gurney (69), Bill Krause (27), Jean Behra (7), and Richie Ginther (211).

FOR FIRST 12 LAPS lead shifted constantly in battle between Phil Hill (2) Ferrari, and Chuck Daigh (5) Scarab, until Hill pulled out with fuel pump trouble. Cars were evenly matched, never more than a few lengths apart in an exciting example of tight high-speed racing ending in well-earned victory for Daigh.



PHOTOS BY BOB D'OLIVO, AL PALACY AND E. PAT BROLLIER

N GRAND PRIX

American sportscars and drivers dominate... Motor Trend Special finishes in top 10.

BALCHOWSKY

CRAWFORD

REVENTLOW

PROFESSIONAL SPORTS CAR RACING is here to stay! If anyone still doubts it, all he need do is consider the 70,000-plus paying spectators who turned out to see Chuck Daigh, 34, push one of Lance Reventlow's metallic-blue Scarabs to victory in the 200-mile Riverside Grand Prix for sportscars. While the trackside temperature soared to over 100°, Daigh averaged 88.8 mph for the 62 laps, finishing the last six laps with virtually no brakes to collect his $5000 prize money.

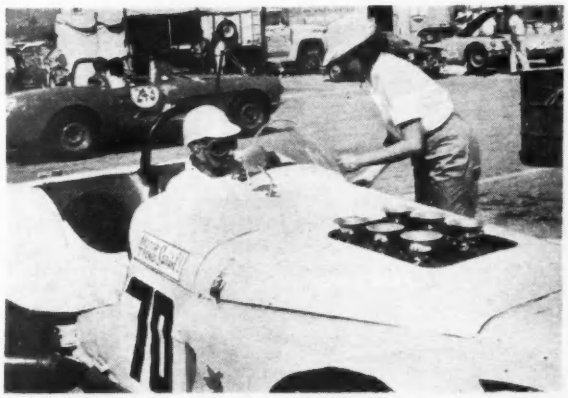
As sponsor for a car which its fans have affectionately dubbed "Old Yeller"—Max Balchowsky's Buick-engined special—MOTOR TREND had a particular interest in the event. Entering as the MOTOR TREND-Blue Streak Special, Max was in fast and expensive company. Although the ungainly machine with its "obsolete" solid front axle will never win any beauty contests, it is one of the fastest-accelerating, easiest-handling sportscars going. Sam Hanks, who drove a couple of practice laps around the 3.27-mile circuit, termed the car, "As comfortable as an old rocking chair."

It was certainly the only car in the race which served as personal transportation for Max and his wife, Ina, for the 60-mile ride from Los Angeles to the race course—a true sportscar by any definition.

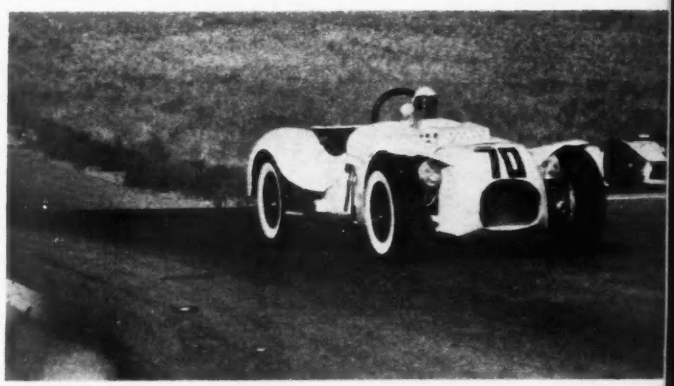
Air turbulence under the front fenders cut Max's straightaway speeds to about 155 mph (compared to 162.54 set by second-place Dan Gurney in a 4.9 Ferrari), but he was a solid bet for fourth place until his transmission failed just before the halfway point. Incidentally, the Jaguar gearbox is the only non-U.S. part in the car. Forced to run in fourth gear, he managed a creditable seventh overall among 24 finishers. Daigh, Gurney, Bill Krause in a D-Jaguar; Jean Behra, RSK Porsche; Richie Ginther, three-liter Ferrari; and Roy Salvadori in a factory DBR-1 Aston Martin were the first six places.

Tire adhesion is of prime importance and after experimenting with both Goodyear Blue Streaks and their Allweather Raceway tires, Balchowsky drove the race on the Blue Streaks, actually pas-

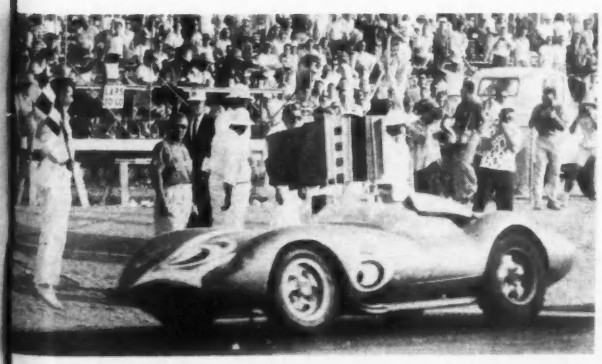
continued on page 81



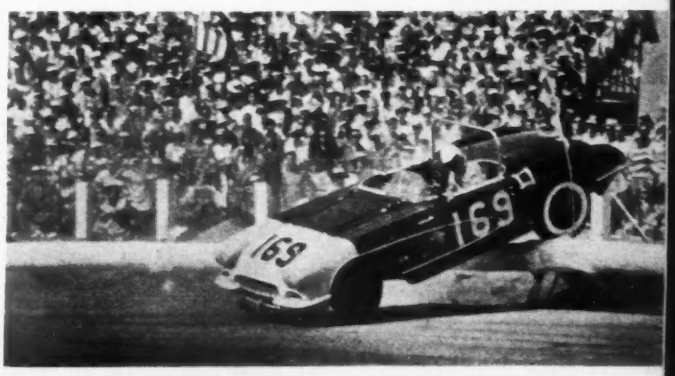
MIT SPECIAL, in pits with driver Balchowsky and wife Ina.



BALCHOWSKY pilots "Old Yeller" by two abandoned cars.



CHUCK DAIGH, in one of Lance Reventlow's Scarabs, takes winner's flag after 200-mile ride which netted $5000.



SLIGHTLY OFF COURSE is Frank Cairns' Corvette in preliminary event—no injuries, but highly embarrassing.

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SPECIAL NOTICE: THIS CHRISTMAS OFFER GOOD ONLY WHEN SENT DIRECT TO PUBLISHER

"I Drove the World's Toughest Trial"

continued from page 25

But it takes more than a bog to stop Australian trial drivers, and although some of the tail-enders were running 12 hours late, they drove like demons toward Canarvon. So late were they that the promised 10-hour rest period in this town was reduced to five, and by the time crews ate, the men were lucky to snatch as much as three hours of sleep.

A 1000-mile drive followed to Derby through the famous Australian bull dust, fine chalk-like sand which completely obscures the car in front. It is so thick and

FORD ZEPHYR crew attempts front end repair in mud and sand near Sydney.

hangs over the road so long that crews used ex-army gas masks on this trip. Even so they were spitting dust when they arrived.

Again for some crews, the rest period was reduced; four hours later, the cars bounced their way towards Darwin. Kangaroos, wild brumbies, straying cattle and even crocodiles were some of the hazards of this drive over a bull-dust-covered track, generously sprinkled with rocky outcroppings. Split sumps and broken differentials became common, and more than six cars withdrew after colliding with kangaroos. Fortunately no one was injured, but the cars were badly wrecked.

Finally Darwin—and a rest period of 30 hours—came into view. After 3000 miles of nerve-racking driving during which some crews had a total of only six hours' sleep, the thought of a rest period in a comfortable bed was uppermost in every competitor's mind.

Darwin was 6500 miles from the starting line, and in a little more than eight days no fewer than 25 cars had retired. Of the remaining 42, all were badly knocked about; many crews doubted their ability to get their cars to the finish line.

Refreshed after sound sleep and plenty of good food, the drivers checked their cars out of Darwin bound for Mt. Isa, the world-famous mining city which lies at the end of the 1600-mile bitumen stretch. Trial officials made this entire route an average-speed section in an effort to reduce the risks associated with high speed. At intervals of two minutes the cars sped down the highway at 48 mph. A Morris Major, driven by Jack Phillips and Don Elliott, ran off the road at the 400-mile peg, somersaulted end-for-end four times before finishing on its four wheels. Phillips was gravely injured and died a few minutes after the crash, the first fatality in an Around Australia Trial. Elliott was not seriously injured.

Monotony is a driver's curse on such a long, straight, flat drive—as is the case from Darwin to Mt. Isa—and crews were thankful when they eventually reached the mining center where another rest period of 12 hours lay in store for them.

The inland drive to Brisbane was over better roads, but in one section, kangaroos proved very troublesome. Twenty drivers reported hitting them during the night, one navigator claiming to have seen 1000 animals during a four-hour period. Busted radiators, shattered fenders and broken windshields resulted, but the cars limped through.

Drivers who had visualized the Brisbane-Sydney section as a "piece of cake" were in for a rude shock. Near Moree an 80-mile muddy section caused a further loss of points to many cars, and two hit trees. It is hard work keeping a skidding car on the roadway when bashing through gooey mud eight or nine inches deep!

Though the last section of the trial lay ahead, the event was far from over.

After a 20-hour stay in Sydney, the weary crews headed towards Australia's snow country: the Australian Alps. Only small drifts of snow and ice were encountered, but road conditions were such that high-speed driving was dangerous. The 150 miles from the finish line of Melbourne turned out to be a real "horror stretch."

It was an 80-mile, mountainous drive featuring hairpin bends every 100 yards or so. The road was an extremely narrow 12 feet, and in places a 2000-foot sheer drop spelled instant death to any driver who made a mistake. Fortunately no driver put a wheel wrong; still only four cars made the final control on time.

And so the world's toughest and longest car trial ended, with only 34 of the original 67 cars crossing the finish line. It proved a triumph for Volkswagen, three of the first four places going to this make.

In the over 2600cc class, a 1958 Chrysler Royal V8 was first, a Rover 90 second, and an Austin Westminster third. Two Peugeot 403s and a Hillman shared the first three places in the 1300-1600cc class. Volkswagens filled all three positions in the 1000-1300cc category, while the under 1000cc class provided the closest tussle of the trial. First place went to the Datsun 1000, marking the first time an overseas car won a class award in an Around Australia event. Two Morris Minors were second and third, followed by the second Datsun.

Australia would welcome any American drivers who would like to have a crack at this rough-and-tough reliability trial. Not only would they be assured of a grand welcome, but the experience should be well worth the expense of making the trip "Down Under."

This is an event where you must be a first-class driver, and be capable of meeting the unexpected, which is likely to confront you around every corner. The reward is worthwhile: the outright winner receives nearly $15,000, while class winners take out $1500. There is also a special award of $2500 for the most successful overseas driver. Will this tempt any American entrants for next year's Around Australia Trial? We in Australia hope so. /MT

The BISCUTER

Spanish miniature sportscar proves real han

HOW DISARMINGLY ENGAGING and harmless the tiny Biscuter "sports" looked when we first saw it peeping from behind a huge finned Detroit model by the curb in Madrid, Spain. The little car's diminutive sleekness made you feel almost affectionate towards it. This somewhat unusual road test was going to be very enjoyable, I thought.

But how deceptive are appearances. Only a few hours later I was limping away from the midget car, shaken, battered, and—I might as well admit it—beaten!

The Biscuter "sports"—officially the Plastico 200-F—is the latest vehicle in a range of diminutive automobiles produced by the Spanish Biscuter Co. in Barcelona. The 200-F's three elder brothers, while being eminently suitable as transport for the far-from-wealthy average Spaniard, are possibly the ugliest cars ever made. But this latest Fiberglas-bodied "sports" model is a tiny triumph of the designer's art.

With much inspiration, the team of designers has molded the Fiberglas around the short 11-foot length of the car so that it looks sleek and well-proportioned. The one defect marring the balance of the car's appearance is the too-tiny wheels. The front end tapers down into a stylish nose with inset headlights and is reminiscent of a recent Pegaso Gran Turismo model. Fore and aft there are decorative, but practically ineffective, chrome bumpers. The smoothly blending rear end opens up to disclose a surprisingly spacious trunk.

The front-wheel-drive car is powered by a 197cc Hispano Villiers engine, made in Spain under license from Villiers of England. Suspension is by leaf springs with rubber elements separating the springs from the underpart of the car. The pedal brake acts on all four wheels, while the handbrake stops the rear pair. Steering is geared, with automatic regulation.

To give the little "sports" a searching road test, I took it out through the busy, weaving traffic of Madrid to the mixture of road surfaces that vein the huge Casa del Campo Park on the city's outskirts. The Park is a road tester's dream, with a variety of circuits ranging from the wide, beautifully surfaced roads numbered with cutoff points where Madrid motor racing takes place, to some of the bumpiest tracks I've ever seen.

The ride out to the Park in the 200-F gave some premonition of the tough time to come. On smoothly surfaced roads the little car whirred along tractably enough, but it started to bounce unmercifully as we traversed several cobblestoned sections.

And when buses loomed alongside you felt as if you'd just crawled on your hands and knees among a herd of elephants!

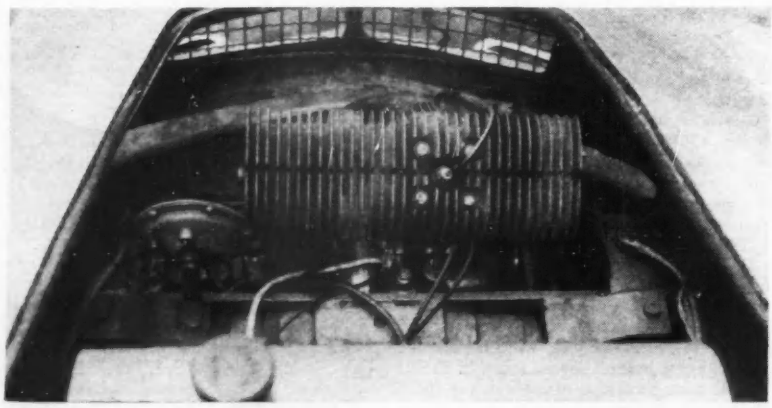
As soon as we reached the Park, the company mechanic, who had been driving up to this point, handed over the little car to me. When I slid across into the driving position I immediately found that although my six-foot height had rested comfortably enough on the passenger's side, as soon as I put my feet on the control pedals my knees were jammed up under the steering wheel.

All the controls were well-grouped, almost ideally situated for the driver: the short, sporty gearshift lever on the floor to the right; the electric starter button looking like a headlight dimmer but in the top center of the floor; the handbrake under the dash where I could instantly reach it with my right hand; the choke, headlight switch, and windshield wiper control right before me; and under the dash to the left, the hand starter.

This last item gave the first real inkling of trouble to come. Because the electric starter wouldn't function, the mechanic explained that I would have to kick the motor over with the hand starter, which was jointed in the middle and topped with a crosspiece.

Easy enough, I thought, and pulled hard on the crosspiece—the jointed rods emerged halfway, then returned with such a pull that my knuckles were skinned on the bottom of the dashboard! Eventually, with much pulling, a great deal of cussing, and at the cost of a very sore hand, I started the engine.

Then I searched for first gear, aware that there were three forward gears and reverse, all engaged by moving the gearshift lever forward or back in a dead-straight line. But I just couldn't find first! In fact, the gearing was so difficult to handle that the only two gears I could be sure of engaging during the whole test drive were third and reverse—the opposite ends of the dead-straight gearshift line! I soon found that the car's gears didn't have just one neutral position, but because of the very simple gearing arrangement, a neutral between every two gears. Disconcerting, to say the least. Eventually I found first, and away the car went. As a preliminary I gave it a general handling test and discovered that the vehicle was remarkably stable around corners. It slid around



POWERPLANT is 197cc Spanish-built Villiers engine. Three-speed transmission gave 10 mph in first, 20 in second, 30 in third (20 mph under claimed top).

...Bouncing B...

...handful in unexpectedly harrowing test

by Neil Dougall

dead-flat at speeds where other cars would have swayed and slithered.

The steering, however, was atrocious—tremendous understeer that needed a huge amount of correction. On a straight stretch I was able to swing the steering wheel almost a complete turn from one side to the other, and yet hardly alter the car's direction.

On the racing circuit I built the speed up to 10 mph in first, 20 in second, and 30 in third. The top speed claimed for the car by the Biscuter Co. is 50 mph. Downhill, with a gale blowing behind it, I gather!

Then from the racing circuit to some very average roadways—and the battle between the baby and me, which had started with a preliminary skirmish as I wrestled in desperation with the steering, began in earnest.

Over even roads the suspension had been rocky enough at speed, but when the surface was less than perfect it seemed there was no suspension at all. The car rocked and swayed and bounced with abandon. Suddenly, as the Biscuter rattled over a series of slight corrugations, came a frightening moment. The whole car started to shake, beginning from deep down and building in violence until it seemed as if we were buffeting through some sort of sound barrier!

Fearing that the little car might be ready to fall apart, I slowed and the terrifying shaking that had convulsed it died away. Again and again that tremendous tremor rocked the car, but it seemed no worse for the shaking it received. Not so the driver! Almost nervously exhausted by the strain imposed by the incredibly difficult steering and gear shifting, I was now battered bodily as well. And there was more to come.

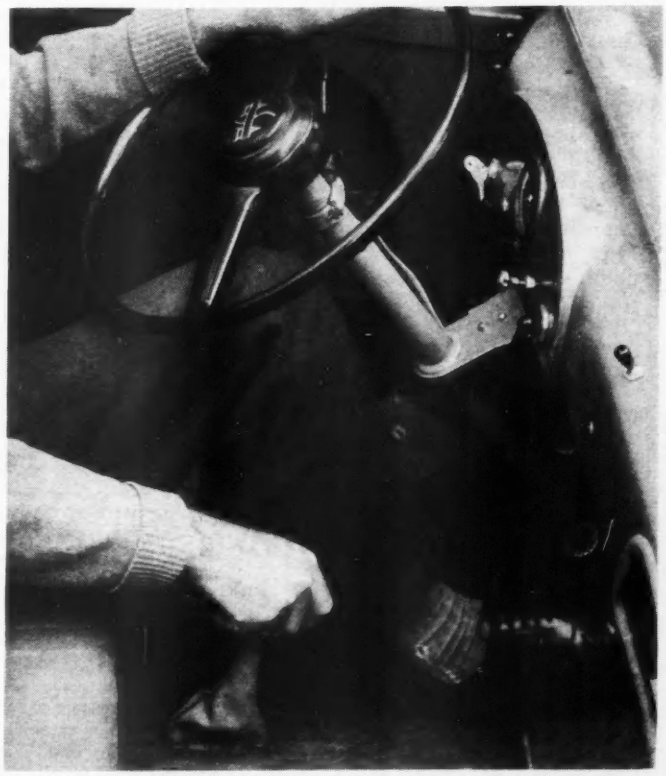
What caused the carquake? A Biscuter mechanic later informed me that with use various parts of the front end loosen, and give rise to the shaking. However, he assured me, it wasn't dangerous. (I wish I'd known at the time!)

As I drove on around the Park the cockpit was beginning to reek with the sickening smell of exhaust fumes, and I surmised that they were being whipped into the car from the rear. Only the rear half of the side windows would open, and I started to suffer very much from the lack of air. Then, almost with disbelief in what my eyes told me, I saw gray smoke rolling in thick clouds from under the dash! It was flooding in from under the hood and swamping the cockpit. I put it down as a fault in that individual car—but no, said the mechanic, when I questioned him later—that happened in all the Biscuters!

One of the good points I had found about the car in operation was that the brakes were real stoppers, and so, squeamish in the stomach from the dense fumes, and almost nervously and physically exhausted, I gratefully stepped hard on them. Then I eased myself from under the steering wheel and staggered forth, gulping fresh air.

I was beaten! The tiny, toy-like car had challenged, and won a decisive victory. And I had thought patronizingly of what a lovable little dwarf it was!

All the strain it showed of the tussle was a faint coat of dust that dulled its sheen. Or did it really grin smugly in satisfaction as I hurried away . . . ?



DRIVER'S POSITION left little room for long legs, but dash controls, handbrake and stubby floor shift lever were conveniently placed.

WHAT'S YOUR QUESTION CHECK WITH CHUCK

Conducted by CHARLES NERPEL Technical Editor

"Are 'lifetime' plugs worth the money?"

HOW WOULD YOU LIKE to buy an engine with permanent "lifetime" spark plugs? American automobile manufacturers would like nothing better than to offer such an engine. Think of the merchandising possibilities of the first car to hit the market with truly permanent spark plugs. Unfortunately, no one as yet has been able to produce such a plug, despite claims to the contrary.

Spark plugs are one of the few parts of an engine that can be easily reconditioned or replaced without too much trouble or expense. It would be wonderful if we could change or recondition our valves as easily. We mention valves because they are exposed to much the same inferno of heat, carbon, and unburned fuel as the plugs—warping, fouling and chilling millions of times during the life of an engine.

The plugs furnished as original equipment for a new car are carefully selected by engineers specializing in ignition systems. Manufacturers often develop a plug for a specific engine to insure good operation of your new car, and while a critical "reading" of plugs in operation in the Adirondacks or Death Valley might show that they are slightly too hot or cold, they do work.

Several leading manufacturers make platinum or multi-point plugs necessary for super-high compressions or oxygen-bearing fuels, but for ordinary engines, save your money. Check and clean your plugs frequently, using a hand wire brush in preference to sand blasting, and set to the recommended gap. Remember, they are important parts of an engine that can be overhauled or replaced at low cost.

"Are detergent oils and additives worth the extra cost?"

IT IS HARD TO IMPROVE the quality of a good oily oil. It *is* possible, however, to increase its cleaning or solvent ability by additives and/or detergents. One of the functions of oil in an engine is to scavenge the wastes of combustion from moving parts, but the more wastes in suspension, the greater the oil dilution. Old-time mechanics used tricks to free sticking valves and rings on cars that were just bogged down from constant stop-and-go city driving. Various solvents, including kerosene, hydrogen peroxide, and even gun-cleaning solutions were poured into spark plug holes and allowed to set. Versions of this treatment are used today with solutions poured into the carburetor, or added to oil. They do work, but remember, there is no substitute for a needed ring, valve or bearing job.

The mileage between oil changes cannot be fixed at a definite figure. Heat, developed by comparatively long drives, rids the oil of many volatile by-products of combustion. Short hauls, stop-and-go city driving, and frequent cold starts load the oil with all sorts of harmful ingredients. The only way to get rid of them is to drain the oil. But what about the filter?

Filters are capable of removing solids in the oil down to very small pieces, but they do not remove volatile or soluble wastes and they do not always filter all the oil all the time. Full-flow oil systems pipe all the oil from the pump through the filter but there are many partial-flow systems where only part of the oil from the pump passes through the filter.

So—use detergent oils for hydraulic lifters; use additives to keep slow driving from bogging down your engine; change oil frequently (as often as 500 miles) if you do a lot of stop-and-go city driving; drive as long as 2000 miles between changes if you are a thousand-mile-a-week salesman; use heavier oil for an engine that has lost its compression; and get a ring and valve job if your mechanic says you need one.

Engines using excessive amounts of oil are losing it through clearances increased to the limit by wear. We know of no additive or lubricant that can shim several thousandths of an inch in bearings, valve guides or cylinder walls. Oils and additives are the results of a lot of research but they are an aid, not a cure-all. Use them for the purpose for which they were developed and do not expect them to substitute for proper mechanical tolerances.

LOTUS CLUB

continued from page 43

method is to lift up the seat cushion every time that you get out; then when you step in you keep the cushion—and your pants—clean. Once you're standing inside, you then place both feet on the floor, and shoehorn your legs under the wheel. This is the *only* way to get in. Otherwise, you'll find that one leg is caught between the tunnel and the wheel, or between the door and the wheel . . . and then you'll have to start the procedure all over again.

Starting was easy enough once the battery situation on this particular car was cured. You turn the key, punch the starter button, choke it if necessary, but don't pump the throttle. You don't let the engine idle too long, since there's no fan; the only cooling you get is when you're moving and air rushes through the radiator.

In town there is a definite tendency to overheat because of the lack of a fan. Several times the temperature went over 100° C, but a few minutes of running at normal road speeds dropped the temperature back to normal. The water won't boil away though, because the expansion tank catches the water that would normally be boiling out.

Since you have to back out of the garage, you reach down to the gear lever on your left, lift up, push over to the right, and drop down into reverse. At first you'll find that you'll be using both hands to do this, but as you get onto it you'll realize it's a safety factor: there is no danger of dropping into reverse (alongside fourth) when you make a snapshift from third to fourth. Incidentally, the top three gears are synchromesh and the shift pattern is the normal H, outside of the reverse position.

The driving position is quite nice, with the wheel in an almost straight-out arm position. The lightweight seats contour to your back and you're wedged down into a comfortable position. (There's no reason for seatbelts.) The pedal positions are good, with ample room between the clutch, transmission housing and steering column, and an equal amount of room for the brake pedal and throttle between the column and the side panel. The driveshaft tunnel traps heat from the engine and the transmission also gets fairly hot; it would be more comfortable if this section were padded.

Watch those water puddles! The water picked up by the tires splatters onto the inside of the fenderwell and comes through the seam where the rear section meets the driver's compartment. For the same reason, take it easy on dirt or on newly tarred sections.

If you take a trip and intend to carry any luggage or clothes other than those that you have on, you'll find there is very little room. We fitted the paraphernalia we carried on our desert and mountain trip with the car into the two small door compartments, on the ledges alongside the driver and passenger, and the rest on the passenger floor. In this way we were able to carry our camera, briefcase, clipboard, jackets, and stopwatches.

For some unaccountable reason the float bowl for the two S.U. carburetors sits between them, and all three units are directly above the exhaust headers. Even though a thin aluminum sheet separates them, the heat from the headers, coupled with the underhood heat, results in the gasoline percolating in the float bowl. This, of course, held down both our performance and gasoline mileage. Even so, we got 25.1 miles per gallon on our mountain-desert-town course of 211 miles.

Is the Lotus Club a street machine? Personally, I look on it as a good base for competition at moderate cost. It has the performance, the handling, and quick access to parts that may need servicing. With the unsnapping of two spring hooks (one on each side at the front) the hood and front fenders lift as one unit, hinging forward. The rear section opens the same way. Both can also be lifted off their cam locks and laid aside.

The Lotus Club with 4.55 rear axle gives 16.7 mph for every 1000 rpm turned in high gear. This means that at the maximum rev limit of 7200, the car is capable of 120.2 mph in top gear and 72.1 mph in third gear. Acceleration is equal to the best sportscars in its category. The Club can turn 86 mph at the end of a quarter-mile through the gears. You can't get much better than that for a sports-racing machine.

It's light, slight, but what a screamer! /MT

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF MOTOR TREND, published monthly at Los Angeles, Calif. for Oct. 1, 1958.

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T. A. JOHNSON
Business Manager

Sworn to and subscribed before me this 25th day of September, 1958.

J. A. THOMPSON

(SEAL) (My commission expires May 24, 1962.)

THE MAN IN THE PEARL-GRAY PITCH

A CARTOON FEATURE by CARL KOHLER

AUTOMOBILES are made to be sold. The individuals who engage in the fine art and science of Showroom-manship are as varied and colorful in their respective sales techniques as are the makes and models of the cars they sell. By quietly lurking in a number of showrooms, Cartoonist Kohler was able to study some of the most talented types who ever flourished a ball-point pen or closed a deal.

EAGLE EYE . . . Wears a haughty mien that practice has taught him impresses the shopper with the fact that his is a quality product. Reserves the right to save his attention for only those interested in luxury models. Can spot a poor credit risk while he or she is still across the street being turned down by a competitor.

NOBODY'S FOOL . . . Operates on the theory that if you can keep them chuckling, you can keep them interested. Has a fantastic fund of jokes, witty remarks, madcap comments and hilarious proverbs. Puts in overtime studying ancient copies of Joe Miller's Joke Book—hunting gags about cars, traffic problems, poor pedestrians.

PSYCHOLOGIST . . . Deliberately assumes a suspicious demeanor, putting customers on guard. Finds that a customer who thinks he is being cheated will speed up a sale by insisting on the very terms this dealer offers anyway. Knows that most customers like to think that they "put something over on that sharpy salesman."

APPRENTICE . . . Has been at the game for 10 years; has found that a simple pseudo-inexperienced air or pretending he doesn't know the ropes gains the potential customer's sympathy and trust. Often feels guilty about not carrying a Screen Actor's Guild card. Would be offended if it were suggested he use deceit or guile.

SEER . . . Affects a profoundly authoritative air of an expert who can confide the real picture behind automotive advertising. Makes sundry, insinuating prophecies which lead to his touting the now-impressed customer to purchase a fine bargain before Detroit discovers that an error has been made and demands the car back.

EGG HEAD . . . Lacks the dramatic ability of his contemporaries, but has a dogged persistence which, when coupled with his flair for juggling figures, stands his sales quota in good stead. Is sincerely sure the buyer does not exist whose budget cannot be stretched, shaped or twisted to fit the easy monthly payments.

EXPRESSIONIST . . . Believes everyone wants to own an artistically perfect automobile. Turns in a magnificent performance, as he points out the sweep of body lines and the rich textures of upholstery. Has been known to sell pink station wagons to people who previously loathed anything but brown business coupes.

SUCCEEDER . . . Sells more cars than any other type of salesperson because he treats the potential customer like a king, demonstrates endless patience, is inherently honest and loves his work. Has only a brief career as salesman, since his abilities quickly carry him up to Sales Manager—or further, his own dealership.

My Greatest Thrill/No. 7

wheel-to-wheel GP

continued from page 34

The Maserati team had just recently found enough power to equal the Ferraris, but they had no margin in hand, so Gonzales was sent out with his fuel tank half full to force the pace from the beginning. From that moment it was every man for himself in the Ferrari team. No precedence for seniors; just get going and get a Ferrari into the lead. Ascari, Villoresi and Hawthorn went out in a tight pack after the burly Argentinean, with Fangio persistently breaking up the group. Often they were driving three abreast on the narrow road, and a mere five seconds covered the first five cars. Just behind them were Farina and Marimon, with the rest of the field trailing away astern. The pace set by Gonzales showed no sign of cracking the Ferraris. As the halfway point approached, Fangio, who was fueled to run through non-stop like the Ferraris, began turning on the heat, for he knew that Gonzales must soon stop for fuel. At 21 laps he took Farina. Five laps later he passed Villoresi. Three laps later he tore past Ascari. At 29 laps Gonzales made his stop for fuel. He was at the pit for a mere 27 seconds, but in that brief spell five cars went snarling past. At 30 laps (half distance) Fangio forced his Maserati past Hawthorn to take the lead. Now the race really began.

Ascari had already shrugged his shoulders expressively as Hawthorn went past, indicating that he could not go any faster, so the new boy set out for Fangio on his own account. At 32 laps he had about half a length lead as they slammed past the pits flat out. He held it for three laps, then Fangio pushed his nose ahead for a couple of laps. Then Hawthorn got half a length ahead and so it went right around the circuit, wheel-to-wheel, an all-out battle, veteran against new boy on two cars of almost identical performance. The official rev limit for the Ferrari engines was 7000 rpm, but Hawthorn was consistently getting 7600 in top down the straight and the engine never faltered.

WHILE THEY WERE RACING three and four to a group in the first half of the race, positions were constantly changed by slip-streaming. One man would tuck in behind another, get drawn along in his wake, gradually closing the throttle as the other car towed him along, then cutting out sharply, he slammed his foot down and used the surge of power to get past. This was fine, but the other man would usually fall in behind to do likewise and with cars and drivers so evenly matched there was very little chance of anyone making a clear breakaway.

Once Hawthorn and Fangio got down to single combat, each realized that the slip-streaming trick was a waste of time, so they battled side by side while the crowd went crazy with excitement. Only inches apart at over 150 mph they sat there grinning at each other, Fangio sitting well back in classic style, Hawthorn hunched over the wheel to keep his tall frame out of the wind, and urging his mount on like a horseman. They were so close that Hawthorn said afterwards he could clearly see the tachometer in Fangio's cockpit.

Top Grand Prix drivers will tell you that there are never more than four or five other drivers whom they will trust to do the right thing in an emergency and they try to give the rest plenty of clearance. Fangio, the shrewd veteran of countless contests, had sized up the young blond Britisher and decided he had the right idea in spite of his short experience, so settled down to fight it out wheel-to-wheel with no quarter asked or given.

For one moment as they slowed for the Thillois hairpin, braking, changing down and twitching the wheel to kill incipient slides, Hawthorn thought he had ruined everything. Fangio braked a little harder than he had expected, and the Ferrari shunted him slightly, denting the Maserati's tail. "That really shook me," said Hawthorn, "for I thought it would take some living down." Fangio, tolerant and imperturbable, showed no resentment at all.

The spectators were thrilled, but it was a thrill with the sharp seasoning of apprehension, for they knew that the slightest incident with two cars racing inches apart at this speed could be disastrous. Said the sober *Autocar*, "It was a battle which exhausted even the spectators with its intensity and duration."

BUT ALL THE EXCITEMENT was lost on young Hawthorn. He said "I did not dream that I had any chance of winning the race; I thought the other Ferrari drivers were just letting me keep Fangio occupied and I expected Ascari, Farina or Villoresi would move up to take over towards the end." Once as they took one of the slower corners neck and neck, a wheel of the Maserati came inside the wheels of the Ferrari. Hawthorn didn't even know enough to be frightened. He shrugged and thought, "I suppose this is what the top men do."

Hawthorn had no idea what was going on behind him, for the pits had long ceased hanging out signals. The mechanics were incoherent with excitement, and even Ugolini had put down his stopwatch. The other drivers watched in awe as the battle went on, deeply conscious of the terrible consequences if either man made the slightest mistake. Once as they screamed neck and neck towards the stands at over 150 mph they caught up with a crippled car coasting to the pits. The crowd thought now at least someone would have to give way, but Hawthorn solved the problem in his own way by putting two wheels onto the grass so that he and Fangio could race past side by side. Time after time they broke the lap record, until Fangio pushed it up to 115.91 mph. Hawthorn remained oblivious to the excitement they were causing. In a classic piece of understatement he told me afterwards, "I was chiefly worried because I thought it must be rather a boring sight for the spectators just watching two cars passing and re-passing time after time."

The rest of the field was thinning fast. Moss had a narrow escape when his clutch flew to pieces, deeply cutting his leg; Macklin and Collins were having trouble with the clutches of their H.W.M.s and Chiron's Osca was withdrawn.

There came a moment when Hawthorn thought he had broken away and could hold the lead. As they accelerated away from Thillois, Fangio seemed to be having trouble with his gear change and dropped back several hundred yards. As Hawthorn drifted around the fast right-hand bend after the pits he caught up with Behra on a Gordini, slowed for a moment and found Fangio on his tail again.

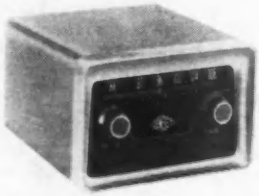
IT WAS NOT UNTIL about 10 laps from the end that it dawned on him that he could really win this race and he then started thinking out ways of crossing the finish line ahead of Fangio. At all costs he must avoid coming out of Thillois slightly ahead, for Fangio would lie in his slipstream and pull out at the last moment to win by inches. Nor was it likely that Fangio would let Hawthorn stay in his slipstream to try the same maneuver. Then Hawthorn saw a ray of hope. As they started the last lap it dawned on him that Fangio had not changed into bottom gear at Thillois the previous time around. Was he having trouble with the gearbox? Impossible to say, but as they roared their way around as close together on that heart-stopping last lap, Hawthorn decided to stake all on getting out of Thillois with a sufficient lead to prevent Fangio's catching a tow in his slipstream.

Neck and neck they screamed for the corner, cut, braked, changed down, braked, changed down again and headed for the apex. Timing his move with split-second precision, Hawthorn slipped into first, cut close around the apex of the turn, straightened up his front wheels, and tramped on the pedal. The tires gripped, the engine sang up to peak revs, and he gained the precious yards he needed. He was just *one second* ahead as they crossed the finish line.

Dimly, through the concentration, he had realized that they were no longer quite alone. Gonzales and Ascari had been fighting a subsidiary battle only a few yards behind them. On the last all-out sprint for the finish line, Gonzales was only a few yards behind Fangio, with Ascari in fourth place another 3.2 seconds behind him.

Youth, audacity and a natural flair had triumphed over the experience of veterans, and Hawthorn had become the first Britisher to win the French Grand Prix since Seagrave's victory in 1923. **/MT**

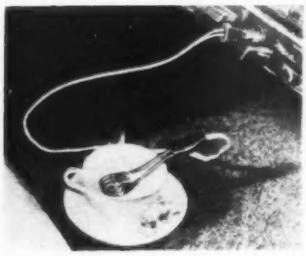
TRENDS in New Products for Christmas



GONSET FM CONVERTER *makes any AM receiver an FM set. For 12 volts only. $84.50 from Young Spring and Wire Co., Burbank, Calif.*

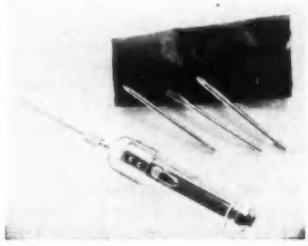
PERMA-RECORD *keeps accurate records of car expenses with a rolling tape that allows instant reference at a glance. Perma-Record, P.O. Box No. 9597, Portland, Ore. $1.50.*

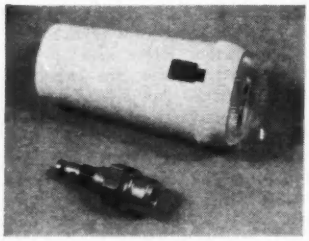
REVEL KITS *have added late models to their car kits and offer a big selection of model rockets, planes and boats in their 1958-'59 catalog. The Dales, Box 25782, Los Angeles.*



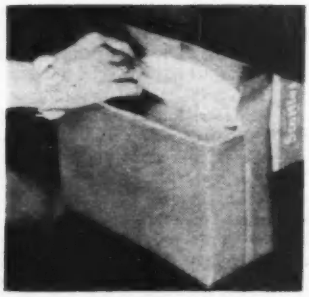
LIQUID IMMERSION HEATER *for the car is offered by Norcrest, P.O. Box 41, Northbrook, Ill. Coil-type all-metal heating unit is non-corrosive and has heat-resisting handle. Plugs into lighter with three-foot cord and heats water in seconds. $3.95.*

FLASH TOOL, *a screwdriver with a built-in flashlight, has four bits including two for Phillips-headed screws, sells for $2.95 complete with leatherette case. Can also be used as flashlight only. Silver Bells, Box 982, Carmel, Calif.*



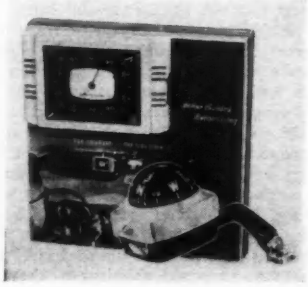


LIGHTBOY, *a trouble light that recharges itself when plugged into dash-mounted storage clip, provides 1½ hours of bright light between charges. Made for 6, 12, 24 volts for $5.75 from German Car Parts, 1135 N. Vermont, Los Angeles 29.*

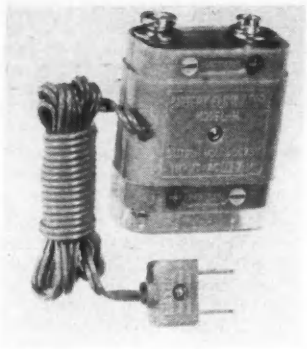


TI-DEE *auto litterbag is designed to keep trash off highways and streets and keep car interiors tidy. It is supplied with built-in tissue holder, three liner bags and mounting hook. $2.95. Advance Enterprises, Inc., Box 1362 MH, York, Penna.*

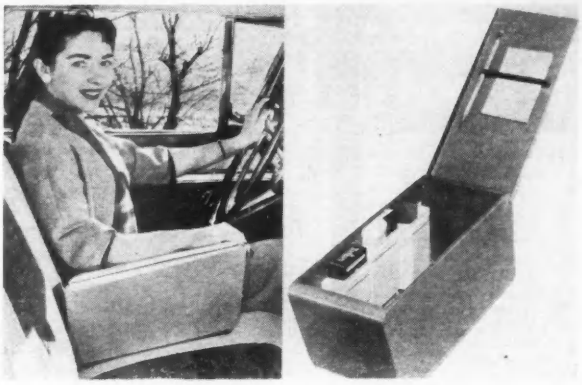
AIRGUIDE INSTRUMENTS *for autos in "gift packs" offer a* **Nomad** *auto compass and thermometer at $10. Airguide Instrument Co., 2210 Wabansia Ave., Chicago.*



THE LORD RIAM *battery-powered shaver gives five months of use on two ordinary flashlight batteries. Dual rotary blade has self-sharpening feature. Belf and Lustig, 46-20 76th St., Elmhurst 73, N.Y. $9.95.*



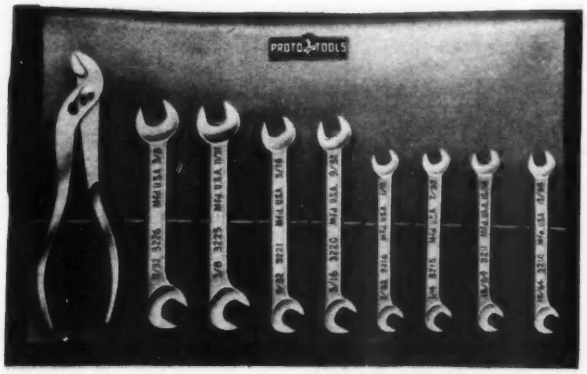
RECHARGE *portable radio batteries (while your set runs on 110 volts) with a battery charger converter. Victoria Merchandising Co., 153 Bay 26th St., Brooklyn 14, N.Y., retails the item for* $4.95.



PAK-REST, *a combination armrest and storage bin, fastens without tools and doubles as a seat for the kids. Plastic-covered top is hinged and interior compartmented for ease in locating small items. Washable top is white but a variety of body colors is available.* $7.50 *from McDonald Products Corp., Buffalo, N.Y.*

BIG BEAM MOUNTY, *a dry battery electric hand lamp with sealed beam bulb and red flasher, will operate on any standard six-volt twin-pack battery. Flasher unit model 664 is* $9.95 *and model 666 with white light sells for* $7.50. *U-C-Lite Mfg. Co., 1050 W. Hubbard St., Chicago.*

HANDGUARDS, *disposable plastic work gloves in rolls and home dispensers, are sanitary, watertight, and acid- and alkali-resistant. Available in rolls of* 1000 *at* 3c *per glove or in packs of one dozen for* $ .98. *Carl H. Biggs Co., Dept.* 907, *Los Angeles* 64.



PROTO TOOLS *are now available in small kits for the amateur mechanic or the occasional tinkerer in Whitworth, Metric and American sizes. The kit above contains tools for carburetor, generator, ignition and distributor work and sells for* $11.34 *from Proto Tool Co., Box* 3517 *Terminal Annex, Los Angeles* 54.

TERADO TRAV-ELECTRIC *converter transforms 12-volt auto current to 110 volt AC. 200-watt capacity runs TV, tape recorders, etc. Terado Company, 1068-MT Raymond Ave., Saint Paul* 8, *Minn.* $99.50.

PRODUCT USE TESTS

Conducted by **Charles Nerpel** Technical Editor

Dynometer from England is small "G" meter

THE BOWMONK DYNOMETER, an interesting instrument from England, requires no hookup except mounting, yet gives a wide range of performance figures at a glance. Calibrated in "G's" (the acceleration rate of 32.2 feet per second per second), and percentages, the meter can be used to compare improved performance after tuning, brake efficiency, and gradients in percentages and ratios. Charts accompanying the instrument convert scale readings to pound/tons of pull for acceleration, and stopping distances in feet and seconds for braking tests.

Used as a driving aid to determine the minimum throttle requirements for a given speed, the Dynometer is great for stretching miles per gallon as it shows the slightest increase or decrease in throttle pressure, and al. with no mechanical connection to the car or engine. The importance of power curves and shift points show up graphically on the Dynometer dial as rate of acceleration falls off despite a climb in engine revs. It's a fascinating instrument, extremely well made, and can be screw-mounted or held securely with a built-in vacuum cup. It has a swivel base to facilitate mounting.

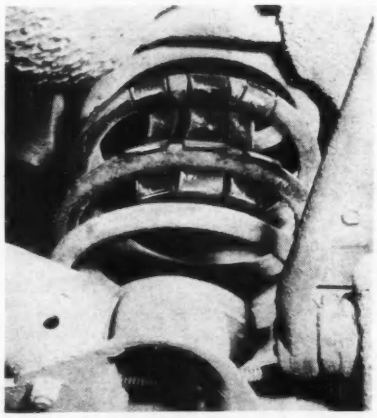
Distributed in the United States by Peduzzi International, P.O. Box 68, Huntington, Long Island, N.Y., the Dynometer retails for $19.95 in the regular model and $22.95 for a recording tell-tale hand type.

Coil-Rite clips restore life to sagging springs

TOUGH SPRING STEEL, formed into the coils that are the muscles of many automobile suspension systems, finally gets tired just as human muscles do. After years and miles of constant flexing to absorb the terrific pounding set up by curves and bumps, the steel becomes fatigued. The space between each coil creeps closer together and the spring no longer returns to its original height—this is described by engineers as a condition of "permanent set."

The most obvious and visible effect of this fatigue is the sagging front end of older cars (sometimes even new cars are affected) with front coil suspension. There are other and more serious effects which are apparent to the driver. As the front end continues to droop, the lowering of the headlight beams sends the conscientious driver to the headlight adjusting station on more than one occasion. Even more serious, the sagging springs introduce a change into the precisely engineered front-end geometry. Wheel camber is particularly affected and results in hard steering and accelerated tire wear. Still another unpleasant effect of sagging springs is the uncomfortable and harmful bottoming on bumps that occurs from the lack of resiliency in the springs.

Several methods have been devised to overcome the problem of sagging springs short of replacing them. Metal spreaders and wedges are available which raise the spring to or near its original height; however, they do nothing to restore the original "rate" or degree of resiliency designed into the spring. Rubber and combination rubber and metal blocks are also used. These devices do restore some resiliency to the spring but they are inclined to pop out of place as the rubber wears because of its direct and constant contact with the active coils of the spring under severe use.



Recently, a simple but cleverly engineered device called Coil-Rite has reached the market which offers a new and effective solution to the sagging spring problem. Coil-Rites are amazingly simple clips formed of flat spring-steel stock. They are inserted between the spring coils and held in place by compression like the blocks, spreaders and wedges, but there the resemblance ceases.

The makers claim that their device will not only restore coils to their original height but also function as a booster spring, creating a variable-rate coil out of the original spring. They also claim that they serve as a damper to the main coils to

prevent surge and that the added general stability decreases body lean in curves. Our subsequent practical tests seem to substantiate these claims.

In explaining the function of their product, the manufacturers have stated that for each 1000 pounds of load carried by the main springs, 125 pounds is carried by each of the booster Coil-Rites. For example, on average rough roads, where bumps are within the 500-pound range of four booster springs, most of the action is in these clip-type springs. On more severe bumps, the blows are absorbed by both the main coils and clips. This gives the softer ride associated with variable-rate springs which have unequal spacing from top to bottom between the coils. These springs are compressed most easily by gentle bumps at the beginning of their motion and require a greater force to compress them as the severity of the bump and the length of spring travel increases.

We installed Coil-Rites on the front end of five different cars—a '50 Buick, '52 Chrysler, '53 DeSoto, a '58 Thunderbird with coils cut for lowering purposes and a '57 T-Bird with perfectly healthy coils. The latter was included in the test to check any changes in riding and handling characteristics; all the others had very droopy noses. Installation was simple and quick—the cars were jacked up until all load was removed from the coils; then three or four Coil-Rites were snapped into position between the center coils of each spring with water-pump pliers.

First results were obvious, the cars with tired coils raised their heads to proper levels; the '57 T-Bird continued to remain on an even keel. All of the cars had been test driven previous to the installations; afterward, these test drives were repeated over numerous types of road surfaces. It was, of course, impossible to check the older cars against their original, new-condition performance, but in the case of these older cars and the butchered '58 T-Bird, there was a marked improvement. They did not bottom, steered better, and inspired confidence in their new-found handling capabilities. In the case of the '57 T-Bird little change in performance or ride was noted except that the car seemed more stable in curves.

The makers of Coil-Rite, the Wright-Hall Products Co., of Santa Monica, Calif., are to be commended for providing a low-cost solution to an aggravating problem.

Formula D'Elegance gives concours finish easily

WITH INCLEMENT WEATHER closing in, now is the time to clean your car's paint of summer scum and oxidation and protect the surface with a good wax.

Formula D'Elegance, a two-solution cleaner-wax designed for imported car finishes but suitable for all types of finely-finished surfaces, is easy to apply and produces a high gloss. It contains a synthetic crystal that becomes smooth under the slight heat of rubbing friction, providing an abrasive finer than any ever before used in automobile cleaners, and guaranteed not to harm the most delicate paint.

White streaks on the maroon finish of a Mercedes, caused by washing with improper soap in the hot sun, disappeared under the gentle application of the cleaning solution. Applying D'Elegance preserving wax over the cleaned area brought back the original high gloss of a highly polished new car.

An MG-TC, whose owner lavished loving care on the paint, was treated with the cleaner-wax solutions and noticeably improved in gloss and depth of color.

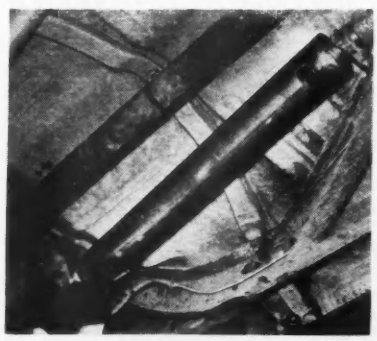
The manufacturer recommends that an old turkish towel be used for cleaning, wax application and polishing. Very little effort is required for either the cleaning or waxing operation, as both solutions spread well and respond to the slightest rubbing to produce a smooth lustrous surface.

Packaged in attractive non-breakable eight-ounce plastic bottles, the cleaner retails for $1.85, the wax for $2.50, and they are handled by Mirror Glaze Distributors, 110 S. Euclid Ave., Pasadena, Calif.

Power-Pak muffler remains quiet after month's use

ONE OF THE FIRST Power-Pak glass pack mufflers to come off the assembly line was installed on a '55 Pontiac for test under average conditions. This car gets its share of stop-and-go driving daily and takes a lot of high-speed punishment on weekends.

The combination of heavy condensation of cold starts and stop-and-go driving, plus the heat and high pressures of fast highway driving, certainly can eat up mufflers in a hurry. Packed silencers, and most frequently



PRODUCT USE TESTS

continued

glass packs, have to be very well made or they develop noise that increases with age because the packing moves away from the inner vents.

Apparently Power-Pak is right in claiming their new method of bonding glass to steel prevents its movement and maintains good silencing throughout the life of the muffler. In our test car, several thousand miles have failed to produce any more noticeable noise than when it was first installed.

Only prolonged use can determine the effectiveness of extra-heavy-gauge steel against rust and the corrosive effects of combustion. As in the past, MOTOR TREND will continue to report the results of products in use over a long period.

Power-Paks are manufactured by the Power-Pak Muffler Co., 416 E. Olive St., Gardena, Calif., and prices are competitive with other high-grade mufflers.

Travel-Aire car cooler helps beat desert heat

ANYONE WHO HAS EVER driven across the desert and suffered under the broiling sun knows how much auto air conditioning means under those conditions. But a refrigerated air unit is relatively expensive and may not be needed enough to justify its purchase.

We have found a highly satisfactory substitute—an evaporative-type cooler, the Firestone Travel-Aire. A 3800-mile trip, fully half of it criss-crossing the Great American Desert in August, proved the worth of the unit to two members of the MT staff. Measuring 12 by 15 by 13¼ inches high, it is designed to be placed on or slightly to one side of the transmission tunnel. Four adjustable legs make it practical to mount on an irregular surface.

Simple installation means connecting a special socket to a hot lead behind the dash—ignition, ammeter, lighter, etc. Plug in, fill with water until the float gauge comes to the top—approximately five gallons—and it's ready for action.

In operation, an outside air vent (we had a conventional cowl vent in our new Dodge pickup) must bring in hot air against the cooler. A powerful fan, blowing against adjustable louvers at the top, cools the air which strikes the saturated cooler pads lining the sides of the unit. Crack open the car windows an inch or two, and you're in business.

We found that the Travel-Aire cooled 110° Mojave Desert temperatures down to the comfort zone . . . not frigid—there are limitations—but a comfortable 80° or slightly below.

In the hot dry climate during fast touring the unit was refilled with water every 200 miles or so—every time we made a fuel stop.

The Travel-Aire is not as effective in the more humid climes. No evaporative cooler is. But we were happy to have it, even in those areas—it was better than no cooler.

Used indoors, the fan has a two-speed control, making the Travel-Aire a dual-purpose unit.

The price is $49.95, and a transformer for 110-volt house current is available for $12.95.

KaiSoto in hospital for face lifting

MOTOR TREND'S KaiSoto test car is reposing in the body shop of customizer George Barris quietly awaiting the skillful strokes of cutters, welding torch and grinder that will transform its front and rear into a dual headlight-tail light conversion. Everyone is suddenly a face-lift expert, and Barris is torn between a fully customized "frenched" installation or a neat bolt-on unit that might be adaptable to other cars. Placing duals on an older-style front may require grille changes. If this is necessary, we will report our solution to the problem.

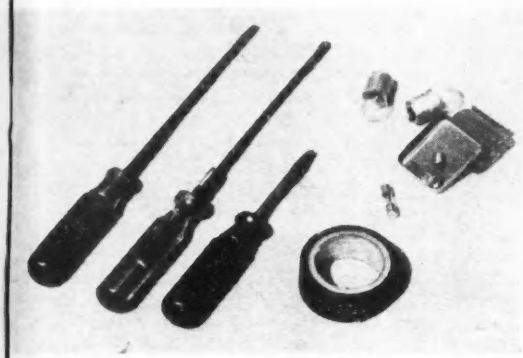
Taking advantage of the KaiSoto's rest between the throes of products in test on various parts of its anatomy, we stripped the floor covering off to reveal the damage of time and water—rust. Sound-deadening materials usually used under automotive floormats have a nasty habit of holding moisture from rain leaks or from splashing through deep puddles, so here is a hint on keeping your old car from rusting through or reconditioning a badly rusted used car.

We were fortunate in that the metal was not too far gone to save without replacing. Scraping and wire-brushing removed the loose scale and a coat of Rust-Oleum, a readily available paint made for rusted surfaces, was applied. As soon as the face lift is complete, we will replace the old sound-proofing with some Fiberglas mat, lay new floor covering over it, and cease to worry about further rust damage in that area.

Caring for LIGHTS and FUSES

DO IT YOURSELF

Photo Story by Steve DaCosta



THE ELECTRICAL LIGHTING SYSTEMS in nearly all automobiles today require little professional attention. For occasional do-it-yourself maintenance, the tools needed are quite simple. To inspect a headlight, remove frame, as illustrated, but be certain that the rim, lens and backing plate come out gently. If the unit is not lighting it may only be that the socket contact is faulty.

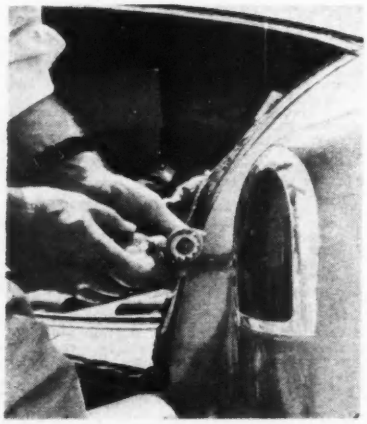
Rear lighting bulbs should be inspected for corrosion and proper seating at the contact point if there is no break in the filament. Emery paper can be used for cleaning.

As for blown fuses, the thing to look for is what might have caused the failure. A check of the wiring system under the hood and fenders is a good starting point. Often, wire insulation becomes frayed by rubbing against metal. Dirt and mud collecting around the lights beneath fenders also cause wear that destroys insulation. Result: bare wiring that will short on any metal. Tape up the bare spots. Follow this with a check of the fuse box. Never use any but the proper voltage fuse to replace the blown one, and NEVER use tinfoil or other makeshift connector.

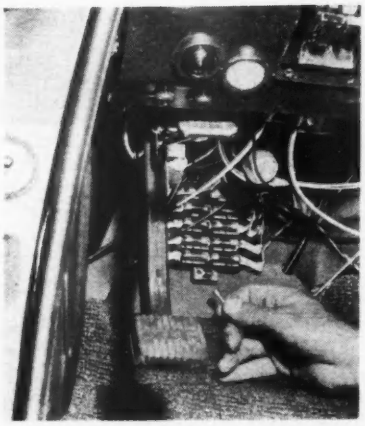
Use of Phillips-head screw driver is needed in most installations. A dish or can cover may be used to collect, hold, all screws on removal.

Determine which of screws to be removed are those holding lenses in position. Others may be beam adjusting screws and are not removed.

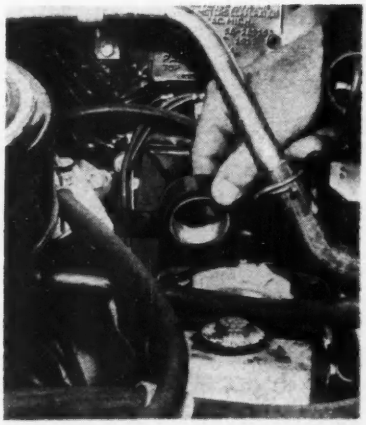
Shown is the removal of sealbeam unit from socket. Note three prongs, to be used as the guide on replacement. Do not hurry, or force.



Tail light assembly, accessible from inside trunk in this case, has removable bulb. If bulb does not light, clean contacts with emery paper.



Spare fuses are sometimes mounted in main fuse box. Note location of central system in this 1958 Pontiac. Always replace with correct size.



Taping worn wire often corrects cause of blown fuses. Inspect wiring in engine area as well as wire lead-in connections under fenders of car.

$ELL 'N' SWAP

Requirements are: copy limit of 25 words (not including name and address); 1st come, 1st served; we reserve the right to edit where necessary; we are not responsible for accuracy of description, although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance, and such communications will not be acknowledged. Only one CAR may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc. The charge is $4 per insertion. If your car is unusual and you have a photo of it suitable for publication, you may submit it with your ad. If we decide to print it there's no cost to you for the cut, but we'll have to decide which photos to use. Sorry, no photos can be returned—Editor

SELL

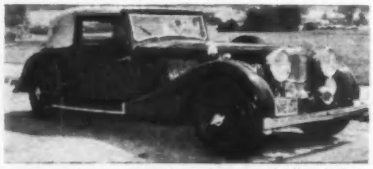
'30 PIERCE-ARROW conv. cpe.—rare model. Orig., complete, one owner, 6 wire wheels, new tires, rumbleseat, trunk with fitted suitcases. Good cond. $850. W. C. Armstrong, 26670 Latigo Shore Dr., Malibu, Calif. Phone GLenwood 7-2441.

'23 BENTLEY Blue Label 3-liter tourer. $3750 or offers, including shipping & insurance. R. G. Stanton, 215 Moor Green Lane, Birmingham 13, England.

'53 MERCEDES-BENZ 220 5-pass. conv. cabriolet. Exc. cond.; maintained at Stuttgart factory. $2200. Pix 25c. CWO G. S. Cole, 11th Trans. Co., APO 46, New York.

CLASSIC & ANTIQUE CAR Sales Catalogs: Packard, Chrysler, Lincoln, Cadillac, Pierce-Arrow, Buick, Orphan & Foreign cars; minimum $5 each. Also MoToR (N.Y.) Annual Numbers. Details for large, stamped, addressed envelope. A. E. Twohy, 400 N. Kenmore, Los Angeles.

RARE '36 ALVIS Speed 25—only one in U.S. Completely orig. except new top; new tires. Immac.



concours d'elegance cond.; A-1 mechanically. $2950. Alberto Morin, 4428 Mariota Ave., North Hollywood, Calif. Phone POplar 2-1682.

1000 BOOKS on Classic & Antique Cars, Automobile Engineering, Motor Racing; Owners Handbooks & Factory Shop Manuals. Catalog 25c. Vivian Gray, The Motorist's Bookseller, Hurstpierpoint, Sussex, England.

CADILLAC PARTS—2 rear springs, 2 front coil springs, 2 front & rear shocks, front & rear inner & outer wheel bearings & universal joints. All in good cond. Fit all Cadillacs from 1941-'48. $35. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

TWO FIRESTONE & U.S. tires—5.50 x 17—like new, $10 each. Also: 2 tubes to fit same—like new, $2.50 each; & 1 '34 Ford wire wheel, $5. A. Ward Shanen, 2444 S. Orkney St., Philadelphia 48, Pa.

ANTIQUE & CLASSIC CAR pictures, manuals, restorations, parts, old car ads, books, information, history, specifications. Send 25c for list. Stanley Edelstein, President Antique & Classic Car Club, 3619 Bedford Ave., Brooklyn 10, N.Y.

MODERN STEAM CARS—Magazine describes super-efficient 1958 American steam automobile, also classic Dobles. Only $3 for a year's supply. Dollar bills accepted, no coins. *Light Steam Power*, Kirk Michael, Isle of Man, U. K.

STEAM CAR POWER UNIT—complete engineer's plans of steam unit for light car—switch-on start. $4.25. Castings, machined components. Dollar bills accepted, no coins. *Light Steam Power*, Kirk Michael, Isle of Man, U. K.

CATALOG COLLECTORS—A few 1927-'31 orig. Hispano-Suiza sales catalogs left. $3.50 each, while they last. Orig. magazine ads & color prints of most autos 1925 thru '40. Motor (N.Y.) Annual Show numbers & monthlies. Complete listing 25c. Sheldon J. Lewis, 61-33 213th St., Bayside, Long Island, N.Y.

'42 PACKARD 180 formal sed. Everything inside & out orig. & just like new—sidemounts, power

windows, r & h, jump seat, spotless uph. 1700 actual mi. $1400. Jens R. Olsen, 1922 Russell Ave. No., Minneapolis 11, Minn.

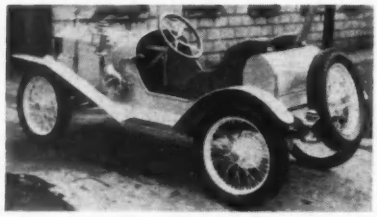
FOR CHEVROLET V8—New dual-point distributor, $27.50, prepaid; new finned alum. valve covers, $10.95, prepaid; 6-volt starter & solenoid, $25; Dontov cam, $25. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

'57 CHEVROLET V8 ENGINE—283 cu. in., with new Dontov cam, valve job, inserts, mains, rings, cam bushings, etc. Never run since rebuilt. $275. Pix & free details on request. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

SIX-VOLT STARTER & solenoid for Chevrolet V8. Saves buying 12-volt equipment when installing in earlier models. $25. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

TWO '57 CORVETTE ENGINES & 2 '57 Thunderbird engines. Free details. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

HOMEMADE JEWEL SPEEDSTER—4 cyl. Turquoise & cream, knockoff wire wheels, lots of brass.



Perfect shape. $900, complete with trailer. Pix & info on request. William Le Master, c/o Rex Radiator Service, 614 Shipman St., Peoria, Ill.

'35 PACKARD Super 8 Dietrich conv. victoria. Restored—including completely rebuilt engine, rebuilt front end, body work, paint, chrome, top, instruments, spares, & numerous misc. D. J. Hoffman, 17 Franklin Pl., Pelham, N.Y. Phone PE 8-0186.

'31 PONTIAC 6 4-dr. sed. All-orig. thruout, orig. owner. Exc. showroom cond.; can be driven anywhere. $775 firm. John D. Danielson, 1806 Grand Ave., Superior, Wis.

PARTS FOR '34 DE SOTO Airflow, SE model: Engines, rear ends, overdrives, transmissions, radiators & many other usable parts. M. B. Kemp, Box 334, Rocky Mount, N. C.

'33 CHRYSLER 6-cyl. 4-dr. sed. Exc. orig. cond.—orig. black finish, 6 wire wheels with 2 fenderwells, free-wheeling. 22,174 mi. M. E. Dermody, 31 Lathrop Ave., Binghamton, N.Y.

'38 CADILLAC 75 Fleetwood V8 sed. 141-in. wheelbase, sound body, good mech. cond., good Lifeguard tires, r & h. Could be restored. Asking $265; make offer. Allan Coutant, 905 N.E. 10th St., Grants Pass, Ore.

'29 ROLLS-ROYCE Phantom I limousine. Superb, exceptional cond. thruout. 6 perfect Para tires, new chrome, immac. orig. finish. Inskip-serviced since new. $1500 firm. Robert T. Hess, N. Maple Ave., Basking Ridge, N. J.

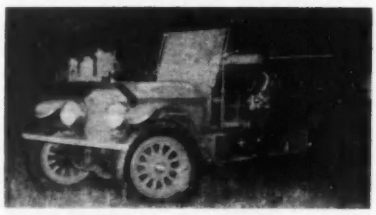
'21 MODEL T touring. Restored, except uph., which is good. $850. Also '25 Model T touring—fair to good. $275. Getman Lumber Co., 164 Litchfield St., Frankfort, N. Y.

MOTOR TREND & HOT ROD magazines—complete from Jan. 1950 to present date. Also 19 extra copies of assorted speed and sport mags. $60 takes all. William G. Eichler, 1142 1st St., Fairfield, Calif.

CATALOGS & BROCHURES of American automobiles—all makes—1949 thru '57. Write for price list or info. Howard Sider, 1646 Pratt, Chicago 26.

ALLARD-CADILLAC J2X with '55 modified engine. Body in perf. orig. cond.; twin sidemounts. Z. F. gearbox, de Dion rear, hydraulic clutch, Alfin brakes. Outstanding performance. $3450. Nelson A. Faerber, Trailways Bldg., Naples, Fla.

'23 AMERICAN LA FRANCE fire engine in good running order. Has rotary gear type pump capable



of discharging 750 gallons per minute at 120 lbs. pressure. George Catalde, 77 Franklin St., Lyons Falls, N. Y.

'32 CHEVROLET 4-dr. sed. 6 wire wheels, 2 fenderwells, orig. mohair uph. New tires; perfect in every way. $500; pix on request. F. A. Tran, Rt. 1, Okemos, Mich.

'29 FORD 2-dr. body—sharp. Best offer over $50. Dragster cowl & chassis—best offer; '40 Merc leaded cpe. with '50 block, needs uph.—$300. Charles Schwab, 3716 N. Bosworth, Chicago. Phone BUckingham 1-1447.

RESTORERS' GUIDE, antique & classic car service. Supply Directory, lists suppliers of cars, parts, tires, books, services; clubs, museums, publications. 1958-59 edition, $2 postpaid. R. Brigham, Frankton, Ind.

'47 LINCOLN CONTINENTAL V-12 hdtp. cpe. Factory-installed genuine leather top, rechromed, new grille (complete). Lots of new parts. $1700 or best offer. Richard E. Seiler, Rt. 1, Greenville, Ohio. Phone LI 7-2265.

'35 CADILLAC 16-cyl., 7-pass. sed., with sidemounts, o.d. Exc. thruout; orig. owner. Complete engine rebuild. $1500 firm; no trades. R. T. Prepoutse, 1747 Broadway, San Francisco, Calif.

'31 PIERCE-ARROW 4-dr. sed. One owner; 11,000 orig. mi. Paint, chrome, tires orig. 6 wire wheels. A silently beautiful auto. $1000 firm. P. V. Campiglia, 50-11 94th St., Elmhurst 73, Long Island, N. Y.

'41 DODGE 4-dr. sed. Driven 3000 mi.; been in storage since new. Uph. never uncovered. New tires, battery, muffler & fuel pump. Orig. owner. T. R. Turner, 6126 Power Dr., Dallas, Tex.

ENGINE FOR PEERLESS out of boat-tail rdstr.—6 cyl. Best offer over $100. Also: 4-cyl. Star engine, 4-cyl. Durant engine, other parts. D. R. Blodgett, Box 1024, Peoria, Ill.

'48 LINCOLN CONTINENTAL 2-dr. sed. Orig. paint, engine, equip't; new w/w's. One owner; 50,000 actual mi. $2250. H. J. Wilhelm, 2700 N.E. 1st Ave., Ft. Lauderdale, Fla.

WRECKED '46 TRIUMPH 1800 conv. Parts for sale, including new engine, new differential, new transmission. Write for list of parts available. Clara Culhane, Montague Rd., Box 130, Rockford, Ill.

FIRESTONE TIRES—4 Super Sport 170-T, 6.50 x 16. Latest pattern; only 2 mo. old, 2000 highway mi. Cost $203, sacrifice for $150, freight paid. C. F. Raley, 830 N. Saginaw Rd., Midland, Mich.

'30 MODEL A. Completely restored; factory uph. just completed. Going to college—must sell. Best offer over $1200. Will deliver within 500 mi. J. G. Carbaugh, P.O. Box 143, Philo, Calif. Phone TWinbrook 5-3202.

'48 LINCOLN CONTINENTAL cpe., with '55 Eldorado George Hurst conversion. New black lacquer, new tires, completely rechromed, new orig. carpeting including trunk—immac. thruout. $3500. R. C. Helms, 1457 Huntingdon Rd., Abington, Pa.

CROSLEY HOT SHOT. Good cond., tires good. Top worn (but seldom used). Red finish. A wonderful sportscar that will increase in value yearly. $500. A. A. Harling Sr., Box 93, Phoenix, Md. Phone COckeysville 1187-W.

'36 CORD 810 conv. phaeton. Exc. mech. cond.—new transmission, recently o'hauled engine & running gear. $1700. O. Reak, 9137 W. Mill Rd., Milwaukee 18, Wis.

'25 MODEL T touring. Orig. owner; never driven much, never out of peninsula. Needs paint; uph. on front seat poor. Best offer. Hazel Meyer, 931 Clinton St., Redwood City, Calif.

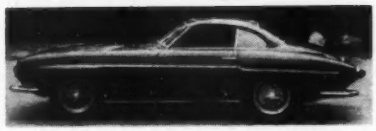
'36 CORD 810 Westchester sed. 95% restored—engine o'hauled & balanced; transmission o'hauled & converted to column shift. Exc. running cond. $1350. Jack Hummel, 12831 Otis Ave., Garden Grove, Calif. Phone JEfferson 7-1012.

'23 OAKLAND touring sed. Perf. cond., including orig. side curtains, tools, etc. 5 new tires. $2000. Francis Heidrich, Box 3788, Orlando, Fla.

SELL OR SWAP

'37 LINCOLN K LeBaron conv. sed. New black lacquer with white top. Bumpers rechromed. Trippe lights. In daily use. Best offer over $1500 or trade. Carleton Penn, Leesburg, Va.

'54 FIAT V8 Ghia cpe. Abarth mufflers, softer shocks, chrome, red paint, Blaupunkt radio—all new.



Immac.; 19,000 mi. Sell or trade for Jaguar, Corvette, T-Bird, etc. Louis Axtman Jr., 1 Des Peres Ave., Framingham, Mass. Phone TR 3-7606.

'29 DU PONT conv. sed., with 6 wire wheels. Only 2 owners; 48,000 mi. Spectacular, dependable, fast. Orig. cost $10,000. Asking $3750. Consider small modern car in trade. S. C. Timson, 8814 Second Ave., Inglewood 4, Calif.

WANTED

'24-'28 CHRYSLER rdstr. or touring in restorable cond. Send details & pix. Any leads or info will be appreciated. Norman Frey, 1421 Morrison Ave., Niles, Calif.

V-12 ENGINE or block assembly or crankshaft-piston rod assembly for '48 Lincoln V-12. Must be new or real good, and priced reasonably. Harry Booher, R.R. #4, Urbana, Ohio.

CONVERTIBLE TOP for '57 Thunderbird—either black or white. Ben R. Koch, 426 High Point Rd., Peoria, Ill.

ARDUN HEADS—set must be stock, complete, & in exc. cond. Will pay top price. Harold Haase, Mt. Nebo Rd., R.F.D. #1, Newton, Conn. Phone GArden 6-4851.

CORD 810 or 812 phaeton or conv. sed. Prefer not supercharged. Body, fenders, etc. must be sound. Send description & price. I. S. Wood, 3000 N.W. 75th St., Miami 47, Fla.

AUTOMOBILE LITERATURE. Will pay highest average price in world for all makes—1900-'47 catalogs, circulars, emblems, manuals, truck literature. Big-car catalogs at premium. Lewis A. Mayer, Munith, Mich.

WILL PAY from $5 to $20 each for orig. sales catalogs of such autos as Auburn, Cord, Packard, Cadillac, Duesenberg, Stutz, Pierce-Arrow, Lincoln, Chrysler, Marmon, etc. Also Motor (N.Y.) Annual Show numbers. State material offered, asking price & cond. of article. Sheldon J. Lewis, 61-33 213th St., Bayside, Long Island, N. Y.

"I Drove a Stock Chevy—135 mph"

continued from page 33

Duntov explained that they were capable of being uneven before they were warmed up by a little use. It was so hot in Detroit that week—in the 90s—that perhaps outside temperature prevented the brakes from ever getting "cold"—though of course this is not the kind of cold Duntov meant. For whatever reason, at no time that I had the car did the brakes show any unevenness. (These iron brake linings evolved from Corvette competition experience, and are a milder version of the fiercely effective shoes that first showed their "metal" at Sebring, 1956.)

As for performance, if the speeds in gears seem just too much to be true, the acceleration times—done with great accuracy—are undeniable proofs of their validity. In a car which weighed 3900 pounds, carried two passengers and was equipped with the single four-barrel carb and a 3.7 to 1 rear-axle ratio, the times given below were obtained.

For highway police who would be willing to sacrifice a bit of the acceleration in order to get a higher top speed for turnpike or thruway pursuit work, a higher rear-axle ratio would do the trick—specifically, for example, a 3.36 rear axle would give a 135-mph top.

Needless to say, any car functioning in these speed ranges must be well set up in all mechanical aspects. The engine must be initially well-tuned, wheel alignment perfect, tires at proper pressures, etc. (The car we tried had, surprisingly, not ultra-high-speed racing tires but U.S. Royal Safety Eights with 28 psi pressure when cold.)

But don't play games with the next Chevy police car you see. The fastest road car we can think of is the Ferrari 250 Gran Turismo. Take a look:

	250 G.T. FERRARI	CHEVY POLICE CAR
0- 60 mph	5.9 secs.	7.4 secs.
0- 80 mph	10.1 secs.	11.5 secs.
0-100 mph	15.5 secs.	18.8 secs.
Top speed	125.6 mph (with 4.57 axle)	129.0 mph (with 3.7 axle) 135.5 mph (with 3.36 axle)

WESTERN GRAND PRIX

continued from page 65

senger car tires. The Raceways were just a bit too hard to bite well on Riverside's smooth and often slick asphalt.

Hottest duel in the *Los Angeles Times* and *Mirror-News* charity event took place in the first 12 laps when Phil Hill, in a 4.1 Ferrari, and Daigh fought for first position, sometimes passing and repassing twice in a single lap. Fuel pump and heating problems forced Hill to make several pit stops and eventually retire on the 58th lap. Daigh was never again seriously threatened.

John von Neumann, a pre-race favorite in his 4.1 Ferrari, was never in contention. A traffic jam on the second turn of the first lap ended in a collision between his car and Lance Reventlow's Scarab. Damage to Von Neumann's car stopped him there while Lance was later flagged off with a badly leaking fuel tank.

Most outstanding showing among the several European pilots was the ride Behra gave the incredibly fast RSK Porsche. After the race settled down, his lap times were equal to the lead car. One by one, he passed bigger and faster cars as smoothly as if he were on a sightseeing tour until he found his fourth place spot. Sweden's Joakim Bonnier, who co-drove with Masten Gregory, finished 11th in a 3.5-liter Monza Ferrari.

A contingent of Indianapolis, midget and sprint car front-runners failed to impress. Only oval track pro who finished was Billy Cantrell, 16th place in a Meyer-Drake-engined roadster. Sidelined for various mechanical ills were such names as Troy Ruttman, Jerry and Bobby Unser, Ray Crawford and Johnny Parsons. Jim Rathman, scheduled to drive John Edgar's Maserati with a GMC experimental engine, broke a piston before the event and never did make the starting line.

It certainly wasn't lack of determination which kept the conventional racing car drivers out of the money. Parsons, who managed to slide Chuck Porter's Chevy-powered Mercedes into a corner guard rail where he stalled the engine, refused aid out of the dangerous spot—aid which would have disqualified him. "Just let it cool off and I'll get it started," he said. "I'll fix the fender, too." And he did, retiring later with transmission trouble.

Two preliminary amateur events started the day's racing. A 50-mile production race saw five Corvettes in the first five places. Skip Hudson, Bob Dickson, Bob Hoffman, Dean Geddes and Scott Briley were the quintet. The 30-mile event for under-1400-cc modified cars was won handily by Jack Ross in a Cooper, followed by Ed Freutel in a Lotus-Fiat, William Molle and H. C. Burgraff, both in Panhard Specials.

The California Sports Car Club is to be congratulated for a fine job of co-sponsoring the race which was sanctioned by the United States Auto Club and recognized by F.I.A.

The American International Rally (announced in October MOTOR TREND), scheduled for November 4-7, has been cancelled. Organizers state that it will be held sometime next year when "unforeseen technical difficulties" are overcome . . . Duane Carter, competition director for the United States Auto Club, has announced that all USAC working agreements with other racing groups have been terminated. This means that any member participating in any competition not sanctioned or approved by USAC will be subject to fine, suspension or both . . . Report from Maserati says that although they would like to race officially in 1959, they think it would be impossible. Too costly? /MT

MT ADVERTISERS INDEX

ESCAPE ROAD

Edited by Erwin Ro

"I think his brakes are gone . . . !"

TIME HAS WHEELS—AS WELL AS WINGS
An Indiana garage mechanic found a wrist watch inside an auto tire he was repairing and showed it to an across-the-street competitor. The latter identified the watch as his, said he had lost it while repairing the same tire several weeks before. The self-winding watch, still running, had traveled 700 miles inside the tire.

SAD STORY NO. 36257
Driving a 1959 model to his father's auto agency showroom for prevue display, a 19-year-old Kansas youth rammed into the rear of another vehicle, badly damaging the new model. The sad clincher: the odometer showed that the '59 car had enjoyed its brand-spanking-new beauty for only one mile!

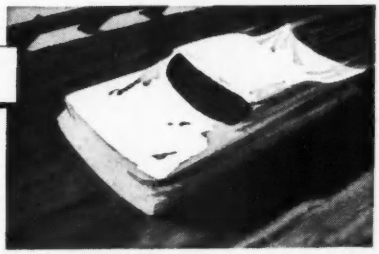
CHALK ONE UP FOR JOHN Q.
Police in Pasadena, Calif., arrested a man for erasing the parking cop's tire chalk marks on the ground that he was "destroying evidence." The man contended that chalk marks were not "evidence" until a crime had been committed; and that no crime had been committed because there's no law against erasing chalk marks. The judge agreed—and freed him on both counts.

FROM THE MOBILGAS ECONOMY RUNS...

FROM POWER CLIMBS AT PIKES PEAK...

FROM NEW CAR RESEARCH 'ROUND THE WORLD...

FROM PROVING GROUNDS AT DETROIT...



The New Car Gasoline

'59 Mobilgas SPECIAL

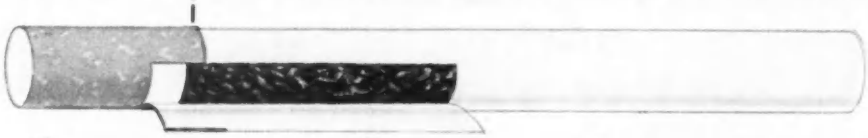
HERE NOW—for your new or late model car—high energy performance that means top miles per gallon!

1959's new cars are on the way. And with them comes '59 Mobilgas Special—created to meet the vital power needs of '59 cars. Here is the first *New Car Gasoline* . . . result of years of studying new cars from every angle—their miles-per-gallon in the Economy Run . . . acceleration and power in the Pikes Peak Hill Climb . . . anti-knock requirements and proving ground performance.

Its high energy performance gives your car instant starts, exciting pick-up, full power and acceleration—top miles per gallon, too! See your friendly Mobil dealer for '59 Mobilgas Special—*The New Car Gasoline!*

SOCONY MOBIL OIL CO., INC., and Affiliates:
MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.

A PURE WHITE MODERN FILTER | *IS ONLY THE BEGINNING OF A* **WINSTON**



It's what's up front that counts

R. J. REYNOLDS TOBACCO CO., WINSTON-SALEM, N. C.

Winston's got it- FILTER-BLEND -mild, flavorful tobaccos specially processed for filter smoking!

You get something special at *both* ends of a Winston! Pure white modern filter to begin with...plus Winston's secret FILTER-BLEND up front in the tobacco end.

After all, if a cigarette doesn't have flavor, you miss out on the whole idea of smoking. But FILTER-BLEND takes care of that with exceptionally fine, mild tobaccos specially processed for filter smoking. That's the real difference between Winston and other filter cigarettes. FILTER-BLEND makes Winston taste good.

America's best-selling filter cigarette

WINSTON TASTES GOOD *LIKE A CIGARETTE SHOULD!*